

# **PREPARATION TEAM**

# ORANGE GROVE PROJECT STAFF ASSESSMENT PREPARATION TEAM

Executive Summary .....	Felicia Miller
Introduction .....	Felicia Miller
Project Description .....	Felicia Miller
Air Quality.....	Willam Walters
Biological Resources.....	Susan Sanders
Cultural Resources.....	Michael McGuirt, Amanda Blosser and Beverly E. Bastian
Hazardous Materials .....	Alvin J. Greenberg, Ph.D. and Rick Tyler
Land Use.....	Robert Fiore
Noise and Vibration.....	Shahab Khoshmashrab
Public Health .....	Alvin J. Greenberg, Ph.D.
Socioeconomics .....	Amanda Stennick
Soil and Water Resources.....	Cheryl Closson
Traffic and Transportation .....	James Adams
Transmission Line Safety and Nuisance .....	Obed Odoemelam, Ph.D.
Visual Resources .....	David Flores
Waste Management .....	Ellen Townsend-Hough
Worker Safety and Fire Protection .....	Alvin J. Greenberg, Ph.D. and Rick Tyler
Facility Design.....	Steve Baker
Geology and Paleontology .....	Dal Hunter, Ph.D., C.E.G.
Power Plant Efficiency.....	Erin Bright
Power Plant Reliability.....	Erin Bright
Transmission System Engineering.....	Ajoy Guha and Mark Hesters
Alternatives .....	Suzanne Phinney
General Conditions.....	Chris Davis
Project Assistant .....	April Albright



## DECLARATION OF Felicia Miller

I, Felicia Miller declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Energy Facilities Siting Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/08

Signed: Felicia M. Miller

At: Sacramento, California

**Felicia Miller**  
**California Energy Commission**  
**1516 Ninth Street, MS-15**  
**Sacramento, California 95814**  
**(916) 654-4640**

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**Professional Experience**

**April 2007  
to present**

**California Energy Commission – Planner II - Siting Project Manager**

Plan, organize, direct and manage the State regulatory process for electric generating plants from application through issuance of permit. Plan, organize and direct the efforts of 23 disciplinary environmental and engineering staff in actions related to the California Environmental Quality Act (CEQA) requirements. Recommend actions, policies and procedures affecting the project and commission program direction. Conduct public workshops and hearings related to proposed projects. I Compile, edit, and issue staff environmental assessments and other CEQA related documents.

**2006-2007 California State Parks**

**Associate Parks & Recreation Specialist – Off Highway Vehicle Division/Prairie City Off-Highway Vehicle Park**

Development of resources study to determine watershed and hydrology, soil taxonomy and geology of State park. Lead on assessment and recommendations for watershed remediation and sediment control project. Climate prediction study to determine weather and hydrology patterns of park over a 25-year period. Research analysis for master and general plan update for district off highway vehicle parks.

**2005-2006 California State Department of Mental Health**

**Senior Mental Health Specialist – Program Compliance**

Program lead in Fingerprinting Analysis/Criminal Background Checks and Investigations Unit. Coordinated and directed assignments and deadlines for staff. Project lead in development of 2 new database programs used to automate data from fingerprint program and facility investigations. Unit coordinator for compilation, coordination and analysis of sections monthly measures and outcomes report, contributed significantly in eliminating CBC unit backlog. Conducted incident investigations to determine regulatory compliance.

**2000-2005 California State Parks**

**Associate Parks & Recreation Specialist – Grants and Local Services**

Administration of park and recreation grants under State and Federal funding to local agencies in over 19 counties statewide and Bureau of Land Management. Provided technical assistance and interpretation of regulations and policy to local agencies, evaluate project status, billing support and documentation, and field inspections to determine compliance with project agreement. Team leader in development of program procedural guides including research of state and federal regulations,

assignments coordination and participation at public hearings and coordinated assignments to meet critical deadlines. Development of program regulations and procedural guide, workshop lead.

**1998-2009 California State Parks**

***Personnel Services Specialist – Human Resources***

Personnel and salary transaction functions for a roster of +400 district and HQ employees. Personnel contact with DPR employees for the purpose of responding to questions and dispensing accurate information to HQ and field timekeepers and employees. Contact with outside agencies for purpose of salary and payroll interpretation and processing. Translated bargaining unit contractual information to managers and employees and translated reference guidelines for laws and rules as set forth by DPA, SCO and SPB. Developed and initiated HQ new employee orientation and improved sign up procedures.

**1997-1998 Department of the Youth Authority  
Public Service and Support Division**

Analyzed and reconciled monthly reported from facilities and prepared monthly reimbursement claims to exceed \$650K. Compiled data, analyzed and prepared intricate spreadsheets for monthly, quarterly and yearly accounting. Responsible for Mac training and support for division. Chair for United Way campaign.

**1994-1997 Department of Fish and Game  
Office of Oil Spill Response-Scientific Division**

Coordinated and prioritized assignments for division and supervised work of support staff. Coordination of interagency efforts as agency liaison during emergency response efforts during a coastline oil spill. Developed Operations Protocol manual for Incident Command Center and emergency response support team. Facilitated public surveys to determine economic value of recreation and natural resources and determine user trends.

**1991-1994 John F. Kennedy High School  
Office of Oil Spill Response-Scientific Division**

Using district graduation and special education requirements; planned, collected, evaluated and analyzed data from a variety of sources to develop a master schedule for educational programs; critical analysis of all phases of student programs to determine eligibility of curriculum prerequisites and high school graduation eligibility; translated high school graduation requirements and policy from district and inter-district transcripts to make curriculum recommendations, conducted curriculum training program to incoming students and parents, supervised team of student assistants. Program lead for targeted youth.

**Education/Credentials**

- Bachelor of Arts, Cum Laude, Sacramento State University in Communication Studies, concentration in Rhetorical Criticism
- California Real Estate Sales License, September 1999, license current

**DECLARATION OF**  
**Testimony of William Walters, P.E.**

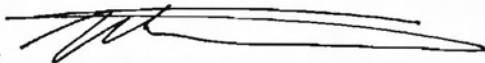
I, **William Walters**, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Systems Assessment and Facilities Siting Division, as a senior associate in engineering and physical sciences.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Air Quality** for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 3, 2008

Signed: \_\_\_\_\_



At: Agoura Hills, California

**WILLIAM WALTERS, P.E.**  
**Air Quality Specialist**

**ACADEMIC BACKGROUND**

B.S., Chemical Engineering, 1985, Cornell University

**PROFESSIONAL EXPERIENCE**

Mr. Walters has over 20 years of technical and project management experience in environmental compliance work, including environmental impact reports, emissions inventories, source permitting, energy and pollution control research RCRA/CERCLA site assessment and closure, site inspection, and source monitoring.

**Aspen Environmental Group**

**2000 to present**

Responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

■ **Engineering and Environmental Technical Assistance to Conduct Application for Certification Review for the California Energy Commission:**

- Preparation and project management of the air quality section of the Staff Assessment and/or Initial Study and the visual plume assessment for the following California Energy Commission (CEC) licensing projects: Hanford Energy Park; United Golden Gate, Phase I; Huntington Beach Modernization Project (including Expert Witness Testimony); Woodland Generating Station 2; Ocotillo Energy Project, Phase I; Magnolia Power Project; Colusa Power Project; Inland Empire Energy Center; Rio Linda/Elverta Power Plant Project; Roseville Energy Center; Henrietta Peaker Project; Tracy Peaking Power Plant Project (including Expert Witness Testimony); Avenal Energy Project; San Joaquin Valley Energy Center (including expert witness testimony); Salton Sea Unit 6 Project (including expert witness testimony); Modesto Irrigation District Electric Generation Station (including expert witness testimony); Walnut Energy Center (including expert witness testimony); Riverside Energy Resource Center (including expert witness testimony); Pastoria Energy Facility Expansion; Panoche Energy Center; Starwood Power Plant; and Riverside Energy Resource Center Units 3 and 4 Project (in progress).
- Preparation and project management of the visual plume assessment for the following California Energy Commission (Energy Commission) licensing projects: Metcalf Energy Center Power Project (including Expert Witness Testimony); Contra Costa Power Plant Project (including Expert Witness Testimony); Mountainview Power Project; Potrero Power Plant Project; El Segundo Modernization Project; Morro Bay Power Plant Project; Valero Cogeneration Project; East Altamont Energy Center (including expert witness testimony); Russell City Energy Center; SMUD Cosumnes Power Plant Project (including expert witness testimony); Pico Power Project; Blythe Energy Project Phase II; City of Vernon Malburg Generating Station; San Francisco Electric Reliability Project; Los Esteros Critical Energy Facility Phase II; Roseville Energy Park; City of Vernon Power Plant; South Bay Replacement Project; Walnut Creek Energy Park; Sun Valley Energy Project; Highgrove Power Plant; Colusa Generating Station; Russell City Energy Center; Avenal Energy Project; Carlsbad Energy Center; Community Power Project; Panoche Energy Center; San Gabriel Generating Station; Sentinel Energy Project; and Victorville 2 Hybrid Power Project.
- Assistance in the aircraft safety review of thermal plume turbulence for the Riverside Energy Resources Center; Russell City Energy Center Amendment (including expert witness testimony); Eastshore Energy Power Plant (including expert witness testimony); Carlsbad Energy Center (in progress); Riverside Energy Resource Center Units 3 and 4 Project; Victorville 2 Hybrid Power Project; and the Blythe Energy Power



Plant and Blythe Energy Project Phase II (including expert witness testimony) siting cases. Assistance in the aircraft safety review of thermal and visual plumes of the operating Blythe Energy Power Plant. Preparation of a white paper on methods for the determination of vertical plume velocity determination for aircraft safety analyses.

- Preparation and instruction of a visual water vapor plume modeling methodology class for the CEC.
- Preparation and project management of the public health section of the Initial Study for the Woodland Generating Station 2 Energy Commission licensing project.
- Preparation of project amendment or project compliance assessments, for air quality or visual plume impacts, for several licensed power plants, including: Metcalf Energy Center; Pastoria Power Plant; Elk Hills Power Plant; Henrietta Peaker Project; Tracy Peaker Project; Magnolia Power Project; Delta Energy Center; SMUD Cosumnes Power Plant; Walnut Energy Center; San Joaquin Valley Energy Center; City of Vernon Malburg Generating Station; Otay Mesa Power Plant; Los Esteros Critical Energy Facility; Pico Power Project; Riverside Energy Resource Center; Blythe Energy Project Phase II; Inland Empire Energy Center; Salton Sea Unit 6 Project; and Starwood Power-Midway Peaking Power Plant.
- Preparation of the air quality section of the staff paper "A Preliminary Environmental Profile of California's Imported Electricity" for the Energy Commission and presentation of the findings before the Commission.
- Preparation of the draft staff paper "Natural Gas Quality: Power Turbine Performance During Heat Content Surge", and presentation of the preliminary findings at the California Air Resources Board Compressed Natural Gas Workshop and a SoCalGas Technical Advisory Committee meeting.
- Preparation of the staff paper "Emission Offsets Availability Issues" and preparation and presentation of the Emission Offsets Constraints Workshop Summary paper for the Energy Commission.
- Preparation of information request and data analysis to update the Energy Commission's Cost of Generation Model capital and operating cost factors for combined and simple cycle gas turbine projects. Additionally, performed a review of the presentation for the revised model as part of the CEC's 2007 Integrated Energy Policy Report workshops, and attended the workshop and answering Commissioner questions on the data collection and data analysis.
- **For the Los Angeles Department of Water and Power (LADWP):**
  - Preparation of the Air Quality Inventory for the LADWP River Supply Pipeline Project EIR.
  - Project management and preparation of the Air Quality Section for the LADWP Valley Generating Station Stack Removal IS/MND support project.
- **For the U.S. Army Corps of Engineers (Corps):**
  - Preparation of the Air Quality Section and General Conformity Analysis for the Matilija Dam Ecosystem Restoration Project EIS/R for the Corps.
  - Preparation of emission inventory and General Conformity Analysis of the Murrieta Creek Flood Control Project and the Joint Red Flag exercise to be conducted in the Nevada Test and Training Range.
  - Emission inventory for the construction activities forecast for the San Jose/Old San Jose Creeks Ecosystem Restoration project for the Corps.
- **Other Projects:**
  - Preparation of the Air Quality Section of the LAUSD New School Construction Program EIR and provided traffic trip and VMT calculation support for the Traffic and Transportation Section.

- Preparation of the draft staff paper “Natural Gas Quality: Power Turbine Performance During Heat Content Surge”, and presentation of the preliminary findings at the California Air Resources Board Compressed Natural Gas Workshop and a SoCalGas Technical Advisory Committee meeting.
- Preparation of the Air Quality Section of the Environmental Information Document in support of the Coastal Consistency Determinations for the suspension of operation requests for undeveloped units and leases off the Central California Coast.
- Preparation of comments on the Air Quality, Alternatives, Marine Traffic, Public Safety, and Noise section of the Cabrillo Port Liquefied Natural Gas Deepwater Port Draft EIS/EIR for the City of Oxnard.
- Preparation of the emission estimates used in the Air Quality Sections for the DWR Tehachapi Second Afterbay Project Initial Study and EIR.

**Camp Dresser & McKee, Inc.**

**1998 to 2000**

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Preparation of emission inventories and dispersion modeling for criteria and air toxic pollutants for the Los Angeles International Airport Master Plan (LAXMP) EIS/EIR.
- Project Manager/Technical lead for the completion of air permit applications and air compliance audits for two Desa International fireplace accessory manufacturing facilities located in Santa Ana, California.
- Project manager/technical lead for the completion of Risk Management Plans (RMPs) for four J.R. Simplot food processing facilities in Oregon, Idaho, and Washington and the Consolidated Reprographics facility located in Irvine, California.

**Planning Consultants Research**

**1997 to 1998**

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Project Manager for a stationary source emission audit of the entire Los Angeles International Airport complex for Los Angeles World Airports (LAWA) in support of the LAXMP.
- Review of the Emission Dispersion Modeling System (EDMS) and preparation of a report with findings to the Federal Aviation Administration for LAWA in support of the LAXMP.
- Project manager for the ambient air monitoring and deposition monitoring studies performed for LAWA in support of the LAXMP, including the selection of the monitoring sites and specialty sub-contractor, and review of all monitoring data.

**Aspen Environmental Group/Clean Air Solutions**

**1995 to 1996**

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Manager of the Portland, Oregon, office of Clean Air Solutions from March 1995 to December 1995, with responsibilities including Project Management, Business Development, and Administration.
- Control technology assessment, engineering support and Notice of Intent to construct preparation for J.R. Simplot's Hermiston, Oregon, food processing facility. Review and revision of an Air Contaminant Discharge Permit application, Title V permit application, and PSD modeling analysis for J.R. Simplot's Hermiston facility.

- Air quality compliance report including an air emission inventory, regulation and permit compliance determination, and recommendations for compliance for Lumber Tech, Inc.'s Lebanon, Oregon, wood products facility.

**Fluor Daniel, Inc.**

**1990 to 1995 and 1996 to 1997**

Mr. Walters was responsible as lead technical or project manager for major environmental projects for both government and private clients. His projects included:

- Prepared several air permit applications for the ARCO Los Angeles Refinery Polypropylene Plant Project; Phase I environmental assessments for properties located in Southern California; and a site investigation and RCRA closure plan for a hazardous waste storage site in Vernon, California.
- Project manager of the Anaconda Smelter site for the U.S. Environmental Protection Agency's (EPA) Alternative Remedial Contract System (ARCS) project during the conclusion of technical activities and project closeout. Prepared a cost recovery report for the project.
- Performed environmental analysis for the Bonneville Power Authority, including air pollution BACT analysis, wastewater analysis, and evaluation of secondary environmental effects of electric power producing technologies.

**Jacobs Engineering Group**

**1988 to 1990**

Mr. Walters was responsible for a wide range of air pollution regulatory and testing projects, including the following:

- Project manager of air toxic emission inventory reports prepared for U.S. Borax's boron mining and refining facility and the Naval Aviation Depot (N. Island Naval Base, San Diego, California).
- Prepared air permit applications and regulatory correspondence for several facilities including the U.S. Department of Energy's Feed Material Production Center uranium processing facility in Fernald, Ohio; Evaluation of a sludge dewatering process at Unocal's Wilmington, California, Refinery; and United Airlines blade repair facility at the San Francisco Airport.
- Characterized and quantified air emissions for offshore oil and gas development activities associated with Federal oil and gas Lease Sale 95, offshore southern California, for the U.S. Minerals Management Service.

**CERTIFICATIONS**

- Chemical Engineer, California License 5973
- CARB, Fundamentals of Enforcement Seminar
- EPA Methods 1-8, 17; Training Seminar

**AWARDS**

- California Energy Commission Outstanding Performance Award 2001



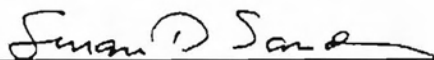
**DECLARATION OF**  
**Susan D. Sanders**

I, **Susan D. Sanders**, declare as follows:

1. I am presently under contract with Aspen Environmental Group to provide environmental technical assistance to the California Energy Commission. Under Contract No. 700-05-002, I am serving as a Biological Resource Specialist and Project Manager to provide Peak Workload Support for the Energy Facility Siting Program and for the Energy Planning Program.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Biological Resources** for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 31, 2008

Signed: 

At: Nevada City, California

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## **Susan D. Sanders**

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### **PAR ENVIRONMENTAL SERVICES, INC. Principal Biologist**

#### **EDUCATION**

Ph.D. Zoology University of California, Davis (1983)

M.A. Zoology University of California, Davis (1979)

B.A. Zoology University of California, Berkeley (1976)

**REGULATORY COMPLIANCE EXPERTISE** in coordination with state, federal, and local agencies in the environmental review process for projects regulated by the California Environmental Quality Act, National Environmental Policy Act, Federal and State Endangered Species Acts, National Fish & Wildlife Coordination Act, Clean Water Act, and California Coastal Act.

**TECHNICAL EXPERTISE** in surveys for threatened and endangered wildlife species; biological inventories; habitat management plans; raptor surveys; wildlife habitat assessment; mitigation monitoring; expert testimony, constraints analysis; sensitive species research. Prepared Biological Assessments for endangered, threatened, and candidate species, and conducted field surveys and literature reviews for willow flycatchers, tricolored blackbirds, Swainson's hawks, giant garter snakes, red-legged frogs, burrowing owls, California spotted owls, San Joaquin kit fox, bald eagles, valley elderberry longhorn beetles, vernal pool crustaceans, and many other special-status species.

**PROJECT MANAGEMENT EXPERIENCE** on large and complex projects, including a two-year survey of 11,000 acres in the Plumas National Forest for a proposed land exchange, involving supervision of eight technical specialists and subconsultants. Responsible for overseeing numerous transportation and revegetation projects and mitigation monitoring programs which involved budget, personnel, and subconsultant management, agency and client coordination, and preparation of technical reports.

**CALIFORNIA ENERGY COMMISSION TECHNICAL ASSISTANCE** PAR is currently assisting Aspen and the CEC in evaluating the environmental aspects of new power plant applications throughout the state, and also providing technical expertise as an avian specialist. Dr. Sanders is currently involved in the following projects:

- **Pastoria Energy Facility Expansion.** Working with CEC staff, Dr. Sanders met reviewed the Application for Certification and associated reference material, prepared Data Adequacy Form and Data Request and a Preliminary Staff Assessment.
- **San Francisco Energy Reliability Project:** For this project Dr. Sanders reviewed the Application for Certification and related information material, met with CEC staff and United States Fish and Wildlife Service regarding endangered species issues, and prepared a Preliminary Staff Assessment.
- **Black Mountain Wind Energy and 69kV Transmission Line Project:** Acting as CEC's avian specialist, Dr. Sanders reviewed the extensive literature of effects of wind development

on avian populations, met with the Public Interest Energy Research staff, and prepared a comment letter on behalf of CEC for the Notice of Preparation for this project.

### **CONSULTING EXPERIENCE (1982 - 2005)**

***Riparian/Wetland Projects.*** Designed and conducted studies of wildlife use of riparian/wetlands and potential impacts of reduced flows and other proposed stream modifications; provided expert testimony. Representative projects include:

- New York Creek Flat Habitat Assessment, Yuba County, Soper-Wheeler Company (PAR)
- Friends of the American River v. EBMUD, Lower American River, Sacramento County (County of Sacramento);
- Teichert/Granite Aggregate Mining Site, Sacramento County (Holliman, Hackard, & Taylor);
- Lower Laguna Drainage Master Plan, Sacramento County (PAR);
- Natomas Ditch Abandonment and Pipeline Construction Project, Sacramento County (PAR);
- Tuolumne River Wildlife Studies for FERC License, Tuolumne County (Holton & Associates);
- Turner Creek Hydroelectric Project, Plumas County (Jones & Stokes Associates);
- Calabazas Creek Flood Control Project, Santa Clara County (Santa Clara Valley Water District).

***Mitigation Monitoring.*** Supervised the design and ongoing monitoring of wetland and sensitive species mitigation projects, including riparian revegetation, vernal pool creation, and mitigation banking. Some projects involved preparation of a Habitat Mitigation and Monitoring Plan, and long-term monitoring efforts (five years plus), as well as preparation of annual reports, and coordination with US Army Corps of Engineers, US Fish and Wildlife Service, California Department of Fish and Game, California Department of Transportation, and the US Environmental Protection Agency. Projects include:

- Dark Horse Mitigation Monitoring, Nevada County (Nevada City Engineering)
- Northpointe, Burrowing Owl Mitigation Monitoring, Sacramento County (PAR)
- Burrowing Owl Mitigation Monitoring, Meadowview, Sacramento County (PAR)
- Wilbur Avenue Overhead Project, Habitat Restoration for Lange's Metalmark Butterfly, Antioch, Contra Costa County, (PAR)
- Swainson's Hawk Nest Monitoring, Garden Highway, Sacramento, Sacramento County (PAR)
- Sierra College Boulevard Riparian Revegetation Monitoring, Roseville, Placer County (PAR);
- Roseville Sanitary Landfill Riparian Revegetation Project, Roseville, Placer County (PAR);
- State Route 99/Calvine Interchange Vernal Pool Vegetation and Fairy Shrimp Mitigation Monitoring, Sacramento County (PAR);
- Potrero Hills Landfill Bird Deterrence Monitoring, Solano County (Global Environmental);
- B&J Sanitary Landfill Bird Deterrence Monitoring, Solano County (Global Environmental);
- State Route 50/Folsom Boulevard Improvement Project, Beach Lakes Mitigation Bank (PAR);
- Niblick Bridge Riparian Revegetation and Mitigation Monitoring, San Luis Obispo County (PAR).

**CEQA/NEPA Documents.** Prepared biological resource sections of Environmental Impact Reports/Statements, Initial Studies, and Environmental Assessments for numerous commercial and residential developments, redevelopment projects, transportation projects, dams, and other water projects throughout northern California. Conducted wildlife and plant community surveys, habitat assessments, agency contacts, data analysis and report preparation. Secured 1602 Streambed Alteration Agreements from California Department of Fish and Game, Section 404 Permits from U.S. Army Corps of Engineers, and 401 Permits from Regional Water Quality Control Board. Some representative projects include:

- Folsom Corporation Yard Redevelopment Plan Project, Sacramento County (PAR Environmental Services, Inc. [PAR]);
- Laguna Creek Interceptor and Sewer Alignment Constraints Study, Sacramento County (PAR);
- Marin Public Safety and Emergency Radio System Project, Marin County (Cord Communication)
- Biological Studies for Endangered Species Compliance, Isabella Dam, Kern County (PAR);
- Granite Quarry, Placerville (The Bedrock Group);
- Pacific-Bell Rocklin Central Dialing Station, Rocklin, Placer County (PAR);
- Whitney Oaks Raptor Surveys, Placer County (Live Oak Enterprises/Pulte Homes);
- Croftwood Project Access Roads, Placer County (Planning Center);
- Auburn Ranch Subdivision Project, Placer County (Area West Engineers);
- Equestrian Ridge Estates, Placer County (PAR);
- Willow Creek Assessment District Swainson's Hawk Surveys, Sacramento County (PAR);
- Bucks Lake Spotted Owls Surveys, Menasha Corporation, Plumas County (PAR);
- Roseville Water Facilities Project, City of Roseville, Placer County (Geier & Geier Consulting);
- Hidden Falls Planned Unit Development, Placer County (JJD Properties);
- Sugar Bowl Ski Resort Expansion, Placer County (Omni-Means, Engineers/Planners);
- City of Lincoln Waste Water Treatment Plant Expansion, Placer County (City of Lincoln);
- Lucky/Hatch Annexation, San Joaquin County (Greystone Environmental);
- The Heritage at Bickford Ranch, Placer County (Geobotanical Phenomenology);
- Dixon Garden Apartments, Dixon, Solano County (Planning Concepts);
- South Branch 60 kV Pole Line Project, Roseville, Placer County (PAR);
- Smith-Moulton Pipeline Project, Nevada County (PAR);
- Morada Ranch Annexation, San Joaquin County (Omni-Means);
- Clover Valley Lakes Estates EIR, Placer County (Planning Concepts);
- Turtle Island, Loomis, Placer County (Export International);
- Fort Hunter-Liggett Wildlife Resource Surveys, Monterey County (Jones & Stokes Associates);
- Superconducting Super Collider EIR/EIS, Yolo and Solano Counties (EIP Associates);
- South Lake Tahoe Redevelopment Agency EIR, El Dorado County (Wagstaff & Brady);
- Stanford Ranch EIR, Placer County (Jones & Stokes Associates);
- Northeast Roseville Specific Plan EIR, Placer County, Placer County (Jones & Stokes Associates).

**Transportation Projects.** Prepared Caltrans Natural Environment Study Reports, Categorical Exemption/Exclusions, Preliminary Environmental Study Forms, and other documentation for bridge replacements, interchange modifications, seismic retrofits, road widenings, emergency storm damage repairs, and other transportation projects in Caltrans Districts 1, 2, 3, 4, 5, and 10. Projects include:

- I-580/Isabel Avenue Interchange Project, Livermore, Alameda County (PAR);
- Gladding Road Bridge Replacement, Coon Creek, Placer County (Planning Concepts);
- Lozanos Road Bridge Replacement, Auburn Ravine, Placer County (PAR);
- Coyote Creek Bridge Replacement Project, Calaveras County (PAR);
- Route 99/Route 120 East Interchange Project, Manteca, San Joaquin County (PAR);
- Route 99/Prado Road Interchange, San Luis Obispo County (PAR);
- Ralston Avenue/Route 101 Interchange, Belmont, San Mateo County (PAR);
- Route 1 Improvement Project, Sand City to Seaside, Monterey County, PEAR (PAR);
- Northeast Area Transportation Plan, Constraints Analysis, Sacramento (PAR);
- Wilbur Avenue Overcrossing Project, Antioch, Contra Costa (PAR);
- Alpine Road Storm Damage Repair, San Mateo County (PAR);
- Pescadero Road Storm Damage Repair, San Mateo County (PAR);
- Route 92 Widening, Half Moon Bay, San Mateo County (PAR);
- Route 99/Hammer Lane Interchange Improvements, Stockton, San Joaquin County (PAR);
- Hammer Lane Widening, Stockton, San Joaquin County (PAR);
- La Gonda Way and Paraiso Drive Bridge Seismic Retrofit, Danville, Contra Costa County (PAR);
- Highway 162 Bridge Storm Damage Repair Project, Sacramento River, Glenn County (PAR);
- Norwood Avenue Reconstruction Project, Sacramento County (Planning Center);
- HOV Lane Construction, US 50, Sunrise to El Dorado Blvd., Sacramento/El Dorado Co. (PAR);
- Dry Creek Bridge Replacement Project, Route 99, Butte County (PAR);
- Ladies Canyon Bridge Storm Damage Repair, Sierra County, (PAR);
- Emergency Storm Damage Repair, Routes 49 and 89, Sierra and Nevada Counties, (PAR);
- Emergency Storm Damage Repair Project for: Route 70/89, Feather River Canyon, Route 20, 147, Plumas, Nevada, and Butte Counties, (PAR);
- Interstate 5 - Benjamin Holt/Hammer Lane Interchange project, San Joaquin County (PAR);
- State Route 113/Interstate 5 Connector Study, City of Woodland, Yolo County, California (PAR);
- Frederickson Road Widening, Antioch, Contra Costa County (May Consulting);
- East Lime Kiln Road Reconstruction Project, Nevada County (PAR);
- Lower Sacramento Road and Bridge Widening, Stockton, San Joaquin County (May Consulting);
- Sierra College Boulevard Widening Project, Roseville, Placer County (PAR);
- State Route 50/Folsom Interchange Improvement Project, Sacramento County (PAR);
- Pico Creek Bridge Replacement Project, Route 1, San Luis Obispo County (PAR)
- Burns Creek Bridge Replacement Project, Route 1, Monterey County (PAR);
- Pajaro River Bridge Replacement Project, Monterey and San Luis Obispo Counties (PAR);



## **Resume of Susan Sanders**

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- Route 113 Widening/North 1st Street Improvements, Dixon, Solano County (Planning Concepts);
- Bridgeport School Bridge Replacement Project, El Dorado County (PAR);
- State Route 49 Widening, Auburn, Placer County (PAR);
- Claus Road Bridge Widening, Modesto, Stanislaus County (PAR);
- Interstate 80/Enterprise Boulevard Interchange, City of West Sacramento, Yolo County (PAR).

**HEP Analysis.** Conducted Habitat Evaluation Procedure (HEP) analyses for Farmington Canal Project, Calaveras County, and Calabazas Creek flood control project, Santa Clara County. Co-author of Habitat Suitability Model for Willow Flycatcher.

**Land Exchanges.** Prepared Biological Assessments/Evaluations for Forest Service land exchanges in the Plumas National Forest. The largest of these was the 11,000 acre Soper-Wheeler Company land exchange, a two-year project requiring management of eight employees and several subconsultants for surveys of rare plants, California spotted owls, northern goshawks, red-legged frogs, and other sensitive species. Other projects include the Crites Mineral Fraction Land Exchange and the Saunders Land Exchange, Plumas National Forest, (PAR Environmental Services, Inc.).

## **TEACHING EXPERIENCE**

**Lecturer.** Biology 10, UCD Zoology Department (1985): Instructor - biology for non-majors.

**Lab Coordinator.** Zoology 2L, UCD Zoology Department (1983-1984): Trained and supervised teaching assistants, managed introductory zoology laboratories.

**Teaching Assistant.** UCD Zoology Department (1977-1983): General Zoology, Vertebrate Structure, Introductory Biology.

**Outstanding UCD Graduate Teaching Assistant** (1983).

## **PUBLICATIONS**

**Beedy, E. C., S. D. Sanders, and D. A. Bloom.** 1991. Breeding status, distribution, and habitat associations of the tricolored blackbird (*Agelaius tricolor*), 1850-1989. June 21, 1991. Jones & Stokes Associates (JSA 88-187.) Sacramento, CA. Prepared for UWFWS, Sacramento, CA.

**Sanders, S. D. and M. A. Flett.** 1989. The ecology of a Sierra Nevada population of Willow Flycatchers (*Empidonax traillii*), 1986 and 1987. California Management Branch Administrative Report No. 89-3, California Department of Fish and Game.

**Harris, J. D., S. D. Sanders, and M. A. Flett.** 1987. Willow Flycatcher surveys in the Sierra Nevada. Western Birds. 18:27-36.

***Resume of Susan Sanders***

***Page 6***

**Flett, M. A. and S. D. Sanders.** 1987. Ecology of a Sierra Nevada population of Willow Flycatchers. Western Birds. 1:37-42.

**Sanders, S. D.** 1983. Foraging Ecology of a Sierra Nevada population of Douglas Tree Squirrels (*Tamiasciurus douglasii*). Ph.D. Dissertation, University of California, Davis.

## DECLARATION OF Michael D. McGuirt

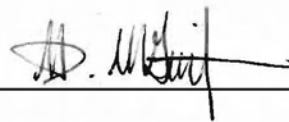
I, **Michael D. McGuirt**, declare as follows:

1. I am presently employed by the California Energy Commission in the **Environmental Protection Office** of the **Siting, Transmission and Environmental Protection Division** as a **Planner II**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Cultural Resources** for the **Orange Grove Peaker** project based on my independent analysis of the application and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 3 NOVEMBER 2008

Signed: \_\_\_\_\_



At: Sacramento, California



## MICHAEL D. MCGUIRT, MA, RPA

15310 Abierto Drive • Rancho Murieta, California • 95683-9192 • 916.354.1345 • [mikeandbeate@netzero.net](mailto:mikeandbeate@netzero.net)

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### OBJECTIVE

To participate in the consultations that guide the management of heritage resources in native, public, and private trusts, to foster public support for heritage resource conservation through archaeological research and public outreach, and to contribute to the formulation of historic preservation policy.

### EDUCATION

MASTER OF ARTS in Anthropology • The University of Texas at Austin May 1996

Area concentration in the North American Southwest. Technical concentrations in geoarchaeology, palynology, and ceramic analysis.

BACHELOR OF ARTS in Anthropology and Archaeological Studies • The University of Texas at Austin  
December 1990

Area concentrations in Mesoamerica and the Andes. Technical concentration in lithic analysis.

### PROFESSIONAL EMPLOYMENT

ENERGY PLANNER II • California Energy Commission, Sacramento, California November 2007 to November 2008

Develop environmental impact analyses of the potential effects that the construction and operation of proposed thermal power plants may have on significant cultural resources. Apply applicable Federal, State, and local statutes and regulations, as they relate to the consideration of cultural resources. Design and execute cultural resource impact analyses that are appropriate to the specific regulatory context for each proposed project. Gather and evaluate information on projects and on cultural resources in project areas. Develop and maintain agency and public relationships to acquire the most useful data and to elicit input in the development of California Energy Commission conditions of certification. Succinctly convey, orally in different public forums and in different written technical formats, the results of cultural resource impact analyses and proposed conditions of certifications meant to mitigate adverse impacts to significant cultural resources. Periodic reviews of licensees' actions to ensure compliance with extant conditions of certification. Oversight of consultants' who are preparing cultural resource impact analyses preservation program.

SENIOR STATE ARCHAEOLOGIST • Office of Historic Preservation, California Department of Parks and Recreation (California State Parks), Sacramento, California December 2004 to December 2005

Out-of-class assignment supervising the Project Review Unit for the California State Historic Preservation Officer (SHPO) in the California Office of Historic Preservation (OHP). As the Acting Chief of Project Review, I managed and trained a staff of eight professionals and one clerical assistant to conduct, on behalf of the SHPO, the review of all Federal agency actions in the State of California under 36 CFR Part 800. 36 CFR Part 800 is the Advisory Council on Historic Preservation's implementing regulation for Section 106 of the National Historic Preservation Act of 1966, and the primary Federal historic preservation program.

ASSOCIATE STATE ARCHAEOLOGIST • Office of Historic Preservation, California Department of Parks and Recreation (California State Parks), Sacramento, California May 2001 to November 2007

Project Review Unit archaeologist for the California State Historic Preservation Officer (SHPO). Consulted under 36 CFR Part 800 on the adequacy of federal agency efforts to comply with Section 106 of

the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470f). Served as SHPO contact person for informal federal agency consultation and formal initiation of Section 106 consultation (36 CFR § 800.3). Reviewed documentation of and provide comment on federal agency determinations and findings (36 CFR §§ 800.4 and 800.5). Negotiated, drafted, and reviewed memoranda of agreement and treatment plans to resolve adverse effects to historic properties (36 CFR § 800.6). Negotiated, drafted, and reviewed program alternatives and management plans (36 CFR § 800.14). Administered federal agency efforts to comply with previously executed agreement documents. Developed and delivered public and professional presentations and workshops on the Section 106 regulatory process in California and the role of the SHPO in Section 106 consultation. Helped create initiatives through the National Park Service's Certified Local Government (CLG) program to encourage the development of local community archaeological site preservation plans. Evaluated and recommended proposals for CLG grants and helped administer resultant grants. Reviewed and provided comment on National Register of Historic Places (National Register) property nominations, and prepared and presented staff reports on the nominations to the State Historical Resources Commission. Member of committee to revise the Comprehensive Statewide Historic Preservation Plan for California, and author of the archaeology section of the plan. The Office of Historic Preservation's (OHP) liaison to the Society for California Archaeology (June 2002 to November 2008).

ARCHAEOLOGICAL CONSULTANT • Kaniakapūpū Project, O`ahu, Hawai`i • Department of Anthropology, University of Hawai`i at Mānoa, Honolulu, Hawai`i June 2000

Recorded exposed architectural elements and directed test excavations to reconstruct building sequences of Native Hawaiian stone architecture. Advised on the interpretation of archaeological stratigraphy and on the field application of archaeological mapping methods and techniques.

ENVIRONMENTAL SPECIALIST III • Jones & Stokes, Sacramento, California February 1999 to May 2001

Designed, conducted, and managed short- and long-term archaeological projects in California, Nevada, and New Mexico to comply with Sections 106 and 110 of the NHPA. Prepared proposals. Assisted with client contract negotiations. Conducted archaeological record searches and archival research. Directed Phase I pedestrian inventory surveys and test excavations for Phase II evaluations. Analyzed material culture assemblages. Prepared technical reports and regulatory compliance documents including National Register property and district evaluations, and monitoring and discovery plans. Represented clients in consultations with federal and state agencies, and coordinated and managed clients' compliance with federal cultural resource regulations and the cultural resource regulations of California, Nevada, and New Mexico.

ARCHAEOLOGICAL TECHNICIAN • B.O.A.S., Inc., Seattle, Washington August 1998 to October 1998

Assisted with data recovery excavations on a short-term cultural resource management contract.

ASSISTANT ANTHROPOLOGIST • Bernice Pauahi Bishop Museum, Honolulu, Hawai`i August 1996 to June 1998

Assisted with archaeological project design, preparation of proposals, and client contract negotiations, directed Phase I pedestrian inventory surveys, test excavations for Phase I subsurface inventory surveys, test excavations for property evaluations, and data recovery excavations, and assisted with preparation of technical reports on short-term cultural resource management contracts. Analyzed field records, prepared site reports and synthetic report chapters, and analyzed and prepared reports on lithic assemblages for Phases I–III of a long-term federal highway project (Interstate Route H–3). Conducted research in Hawaiian archaeology, and delivered public and professional presentations of that research. Advised on the integration of geoarchaeological methods and techniques into cultural resource management field efforts, and on geoarchaeological interpretations of extant field records, and designed and conducted geoarchaeological components of fieldwork for short-term cultural resource management contracts.

FIELD DIRECTOR • Chersonesos Project, Ukraine, Eastern Europe • Institute of Classical Archaeology, University of Texas at Austin, Austin, Texas May 1996 to July 1996

Assisted in archaeological project design. Directed a geoarchaeological reconnaissance, a pedestrian inventory survey, archaeological mapping, test excavations, and data recovery excavations in the National Preserve of Tauric Chersonesos. Conducted on-site project presentations for the United States Ambassador to Ukraine, and Ukrainian and Russian archaeological scholars. Assisted in the preparation and implementation of archaeological site preservation plans. Taught archaeological field methods and techniques to graduate students. Prepared portion of requisite field report for Crimean Archaeological Council, Simferopol.

ASSISTANT FIELD DIRECTOR • Chersonesos Project, Ukraine, Eastern Europe • Institute of Classical Archaeology, University of Texas at Austin, Austin, Texas May 1995 to July 1995

Assisted in the direction of data recovery excavations in the National Preserve of Tauric Chersonesos. Taught archaeological field methods and techniques to graduate students. Advised on the interpretation of archaeological stratigraphy.

ARCHEOLOGIST I • Archeology Survey Team • Texas Parks and Wildlife Department, Austin, Texas December 1994 to May 1995

Assisted in the direction of pedestrian inventory surveys, the preparation of cultural resource management plans, and the preparation of state site forms and reports of investigations. Advised on the integration of global positioning system (GPS) technology and the field methods of archaeological survey.

RESEARCH ASSISTANT • Colha Project, Belize, Central America • Department of Anthropology, University of Texas at Austin, Austin, Texas July 1994 to August 1994

Conducted an extensive ground survey to correct the published base map for the Maya site of Colha. Assisted in mapping of surface architectural ruins. Directed a test excavation crew. Assisted in the preparation of the field report.

ARCHAEOLOGIST • Lower Colorado River Authority, Austin, Texas February 1994 to December 1994

Designed and implemented trial mitigation plans for archaeological sites threatened by fluvial and lacustrine erosion. Assisted in pedestrian inventory surveys and test excavations, the preparation of state site forms, the development of the agency's database of its archaeological site inventory, and public education initiatives that included site tours for primary and secondary students, and workshops for primary and secondary teachers.

## COLLEGIATE EXPERIENCE

TEACHING ASSISTANT • Archaeological Analysis • Department of Anthropology, University of Texas at Austin, Austin, Texas August 1993 to December 1993

Presented undergraduate lectures on archaeological method and theory. Wrote and graded examinations. Advised students.

TEACHING ASSISTANT • Archaeological Field School, New Mexico • Department of Anthropology, University of Texas at Austin, Austin, Texas May 1993 to July 1993

Taught archaeological field methods and techniques to undergraduate and graduate students.

PROJECT ARCHAEOLOGIST • WS Ranch Project, New Mexico • Department of Anthropology, University of Texas at Austin, Austin, Texas May 1992 to July 1992, May 1993 to July 1993

Designed and prepared proposals for two field seasons. Addressed New Mexico State Historic Preservation Office and United States Forest Service comments on the proposals. Directed test excavations and data recovery excavations for two field seasons. Conducted geoarchaeological, palynological, and material culture analyses. Prepared a report of the research.

VOLUNTEER LITHIC ANALYST • WS Ranch Project, New Mexico • Department of Anthropology, University of Texas at Austin September 1991 to December 1991

Analyzed lithic tool collections from San Francisco and Three Circle phase Mogollon sites on the Gila National Forest.

VOLUNTEER ARCHAEOLOGICAL TECHNICIAN • WS Ranch Project, New Mexico • Department of Anthropology, University of Texas at Austin June 1991

Assisted in test excavations for the Phase II evaluations of San Francisco and Three Circle phase Mogollon sites on the Gila National Forest in advance of the development of an interpretative trail.

VOLUNTEER LITHIC ANALYST • WS Ranch Project, New Mexico • Department of Anthropology, University of Texas at Austin September 1990 to December 1990

Analyzed a lithic tool collection from a Three Circle to Tularosa phase Mogollon site on the Gila National Forest and submitted a report of the analysis.

ARCHAEOLOGICAL TECHNICIAN • Archaeological Research, Inc., Austin, Texas July 1990

Assisted in a Phase I pedestrian inventory survey on the Sitgreaves National Forest, Arizona in advance of a timber sale.

ARCHAEOLOGICAL TECHNICIAN • New World Consultants, Inc., Albuquerque, New Mexico June 1990

Assisted in a Phase I pedestrian inventory survey on the Gila National Forest, New Mexico in advance of a timber sale.

UNDERGRADUATE PARTICIPANT • Archaeological Field School, New Mexico • Department of Anthropology, University of Texas at Austin May 1990 to July 1990

Laid out mapping control networks and assisted in test excavations on a Reserve phase Mogollon site and a Three Circle to Tularosa phase Mogollon site, and assisted in a pedestrian inventory survey of the upper San Francisco River Valley on the Gila National Forest.

## TECHNICAL KNOWLEDGE AND SKILLS

### CULTURAL RESOURCE AND ENVIRONMENTAL LAW

Expert knowledge of Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470f), as amended, and the regulation that implements Section 106 (36 CFR Part 800). Thorough knowledge of Section 110 of the NHPA and the U.S. Army Corps of Engineers' Appendix C to 33 CFR Part 325. Working knowledge of the Native American Graves Protection and Repatriation Act of 1990, the National Environmental Policy Act of 1969, the Archaeological Resource Protection Act of 1979, the California Environmental Quality Act of 1970, and cultural resource statutes, regulations, and guidelines for the states of California, Hawai'i, Nevada, New Mexico, and Texas.

## GEOARCHAEOLOGY

Specialty in geoarchaeology with emphases on processual and historical geomorphology, paleoecology, stratigraphy, pedology, and sedimentology. Strong ability to reconstruct the depositional history and paleoenvironment of archaeological resources at multiple areal scales. Design and implement geoarchaeological data collection strategies. Analyze and interpret resultant data. Analyze and interpret geoarchaeological data from extant field records. Expertise used to provide superior contexts for material culture assemblages and architecture at sites in Hawai`i, Ukraine, and New Mexico.

## MAPPING AND SPATIAL ANALYSIS

Five years of professional land surveying experience prior to 1988. Thorough knowledge of principles and techniques of land surveying, of a wide variety of optical instruments, of GPS receivers, and of the integration and manipulation of positional and attribute data from multiple sources in drafting and GIS applications. Expertise used to develop archaeological mapping and GIS programs for projects in California, Ukraine, Belize, Hawai`i, New Mexico, and Texas.

## ARCHAEOLOGICAL SURVEY AND EXCAVATION

Archeological survey and excavation experience on sites that represent a wide range of cultures, time periods, and environments. Survey experience in California on nineteenth and twentieth century Karuk sites and late nineteenth to early twentieth century Euroamerican mining sites, in Nevada on Pre-Archaic, Archaic, and Protohistoric Native American sites and mid-nineteenth to early twentieth century railroad, mining, emigrant trail, and homestead sites with European, Euroamerican, and Asian components, in northeastern and southern Texas on Paleoindian, Archaic, Caddoan, and early nineteenth to early twentieth century Euroamerican sites, in western New Mexico and eastern Arizona on Archaic and Mogollon sites, on the Na Pali Coast of Kaua`i, Hawai`i on precontact Native Hawaiian sites and in the southern Crimea, Ukraine on Neolithic, Bronze Age, Greek, Roman, Byzantine, and nineteenth century Russian sites.

Excavation experience in California on late nineteenth to early twentieth century Euroamerican mining sites, early twentieth century Euroamerican homesteads, and a Feather River site with Maidu and Euroamerican components, in western New Mexico on Early Pithouse period, Three Circle, Reserve, and Tularosa phase Mogollon sites, in eastern Belize on the Middle Preclassic to Postclassic Maya site of Colha, on O`ahu, Hawai`i on early postcontact to early twentieth century sites with Native Hawaiian, Chinese, Japanese, European, and Euroamerican components in downtown Honolulu, on the East Loch of Pearl Harbor, and in Nu`uanu Valley, in Washington on an Olcott phase Native American site, and in the southern Crimea, Ukraine on Hellenistic Greek and Roman sites.

Experience in the excavation of adobe and stone architecture, house pits or pithouses, former sites of wooden and grass structures, ancient roadways, hearths, refuse pits, storage pits, and extramural surfaces.

## MATERIAL ANALYSES

Experience with a wide range of prehistoric and historic material culture. Analyzed and reported on lithic assemblages from Hawai`i and New Mexico, ceramic assemblages from Ukraine and New Mexico, sediments from Hawai`i, Ukraine, and New Mexico, and fossil pollen from New Mexico. Ability to identify and date archaeological site assemblages with late eighteenth to early twentieth century architectural materials, bottle glass, tin cans, and American, British, Chinese, and Japanese ceramics.

## COMPUTER LITERACY

Experience with diverse word processing, spreadsheet, database, drafting, graphics, data processing, and GIS applications on PC (Windows XP) and MacIntosh platforms in networked environments. Word processing applications used include Microsoft Word and WordPerfect. Spreadsheet applications used include Microsoft Excel. Database applications used include Microsoft Access, Quattro Pro, FoxPro, and



MinArk. Drafting applications used include AutoCAD and Surfer. Graphics applications used include CorelDraw. Data processing applications used include PathFinder, SurveyLink, and GeoLink. GIS applications used include ArcView.

## RECENT PROFESSIONAL DEVELOPMENT

### CULTURAL RESOURCE AND ENVIRONMENTAL LAW

*ACHP - FHWA Advanced Seminar: Reaching Successful Outcomes in Section 106 Review* • Vancouver, Washington • Advisory Council on Historic Preservation, Don Klima and Carol Legard; Federal Highway Administration, Mary Ann Naber October(2007)

*NEPA Compliance and Cultural Resources* • Portland, Oregon • National Preservation Institute, Joe Trnka October(2007)

*Section 106: How to Negotiate and Write Agreements* • Sacramento, California • National Preservation Institute, Claudia Nissley November(2004)

*Consultation with Indian Tribes on Cultural Resource Issues* • Sacramento, California • National Preservation Institute, Thomas F. King and Reba Fuller September(2003)

*Section 106: How to Negotiate and Write Agreements* • The Presidio, San Francisco, California • National Preservation Institute, Thomas F. King May(2002)

*Introduction to CEQA* • Sacramento, California • University of California, Davis, Continuing and Professional Education, Ken Bogdan and Terry Rivasplata July(2000)

### TECHNICAL ARCHAEOLOGY

*Introduction to Historic Site Survey, Preliminary Evaluation, and Artifact ID* • West Sacramento, California • California Department of Transportation and California Department of Parks and Recreation, Glenn Farris, Larry Felton, Julia Huddleson, Anmarie Medin, Pete Schulz, Judy Tordoff, and Kimberly Wooten September(2006)

*Principles of Geoarchaeology for Transportation Projects* (Course No. 100246). Sacramento, California • California Department of Transportation, Graham Dalldorf, Glenn Gmoser, Jack Meyer, Stephen Norwick, Adrian Praetzelis, and William Silva October(2006)

### INFORMATION TECHNOLOGY AND CULTURAL RESOURCE MANAGEMENT

*GIS: Practical Applications for Cultural Resource Projects* • Sacramento, California • National Preservation Institute, Deidre McCarthy September(2006)

### STATE GOVERNMENT

*Introduction to California State Parks* • Asilomar, Monterey County, California • California Department of Parks and Recreation and Monterey Peninsula College December(2001)

## PUBLICATIONS, REPORTS, PAPERS, AND WORKSHOPS

Darcangelo, Jennifer, John Sharp, Michael D. McGuirt, Andrea Galvin, and Clarence Caesar

2004 *Section 106 for Experienced Practitioners: Consulting with the California SHPO (GEV4111)*. Course taught on 8 September in Oakland to California Department of Transportation cultural resources personnel and private sector cultural resource consultants (8 hours).

Darcangelo, Jennifer, John Sharp, Michael D. McGuirt, and Andrea Galvin

- 2005 *How to Consult with the California SHPO*. Workshop presented on 23 April at the 39th Annual Meeting of the Society for California Archaeology, Sacramento, California (6 hours).

Jones & Stokes

- 1999a *Cultural Resource Inventory Report for Williams Communications, Inc. Fiber Optic Cable System Installation Project, Wendover, Nevada to the California State Line*. Volume 1: Draft Report. July. (JSA 98-358.) Sacramento, California. Prepared for Williams Communications, Inc., Tulsa, Oklahoma.
- 1999b *Cultural Resources Report for the Williams Communications, Inc. Interstate 80 Fiber Optic Cable System Installation Project*. Volume I. September. (JSA 98-358.) Submitted to Williams Communications, Inc., Tulsa, Oklahoma. On file with the State Historic Preservation Office, Carson City, Nevada.
- 1999c *Archaeological Site Avoidance and Monitoring Plans for Williams Communications' Fiber Optic Cable Installation In the Union Pacific Railroad Right-of-Way, Doña Ana County to Hidalgo County, New Mexico*. October. (JSA98-379.) Sacramento, California. Prepared for Williams Communications, Inc., Tulsa, Oklahoma.
- 2001 *Final Phase II Cultural Resource Evaluation for the Kramer Mining District, Edwards AFB, Kern and San Bernardino Counties, California*. Volume I. November. Sacramento, California. On file with the Base Historic Preservation Officer, Edwards AFB, California.

Lebo, Susan A. and Michael D. McGuirt

- 1997 *Geoarchaeology at 800 Nuuanu: Archaeological Inventory Survey of Site 50-80-14-5496 (TMK1-7-02:02), Honolulu, Hawai'i*. Department of Anthropology, Bishop Museum, Honolulu. (100 pp.) Submitted to Bank of Hawaii, Honolulu. On file with the State Historic Preservation Division, Honolulu.
- 1998a *Assessments of Stone Architecture: a Case Study from North Hālawā Valley, O'ahu*. Paper presented at the 11th Annual Hawaiian Archaeology Conference of the Society for Hawaiian Archaeology, Kailua-Kona, Hawai'i.
- 1998b *Pili Grass, Wood Frame, Brick, and Concrete: Archaeology at 800 Nuuanu*. Department of Anthropology, Bishop Museum, Honolulu. (142 pp.) Submitted to Bank of Hawaii, Honolulu. On file with the State Historic Preservation Division, Honolulu.

Lennstrom, Heidi A., P. Christiaan Klieger, Michael D. McGuirt, and Susan A. Lebo

- 1997 *Archaeological Reconnaissance of Pouhala Marsh, 'Ewa District, O'ahu*. Department of Anthropology, Bishop Museum, Honolulu. (14 pp.) Submitted to Ducks Unlimited, Inc., Rancho Cordova, California. On file with the State Historic Preservation Division, Honolulu.

McGuirt, Michael D.

- 1996 *The Geoarchaeology and Palynology of an Early Formative Pithouse Village in West-Central New Mexico*. Unpublished M.A. thesis, Department of Anthropology, University of Texas at Austin.
- 1998 50-80-10-2010, 50-80-10-2016, 50-80-10-2088, and 50-80-10-2134. In *Activities and Settlement in an Upper Valley: Data Recovery and Monitoring Archaeology in North Hālawā Valley, O'ahu*, vols. 2a and 2b, edited by Department of Anthropology, Bishop Museum, pp. 1-3, 1-44, 1-5, and 1-46. Department of Anthropology, Bishop Museum, Honolulu. Submitted to State of Hawaii, Department of Transportation, Honolulu. On file with the State Historic Preservation Division, Honolulu.
- 2002 Committee Reports, OHP Liaison. *SCA Newsletter* 36(3):4-5.
- 2004 Committee Reports, OHP Liaison. *SCA Newsletter* 38(2): 7, 38(3):6-8.

- 2006 Preservation Archaeology. In *California Statewide Historic Preservation Plan: 2006–2010*, edited by Marie Nelson, pp. 8–15. California Department of Parks and Recreation's Office of Historic Preservation, Sacramento. Submitted to the National Park Service, Washington, D.C. On file at the California Office of Historic Preservation, Sacramento.
- 2008 Dealing with Multi-element Cultural Resources under Section 106. In *Historic Properties Are More Than Meets the Eye: Dealing with Historical Archaeological Resources under the Regulatory Context of Section 106 and CEQA*. Session presented on 25 April at the 33rd Annual California Preservation Conference of the California Preservation Foundation in Napa, California, moderated by Michelle Messinger and Michael D. McGuirt (1 1/2 hours).

McGuirt, Michael D. and Leigh Ann Garcia

- 1991 Lithic Stew at Apache Creek: the 1990 Chipped Stone Artifact Collection from LA 2949. In *An Analysis of Lithic Artifacts Recovered During the 1990 Test Excavations at the Apache Creek Site (LA 2949)*, Gila National Forest, West Central New Mexico, edited by James A. Neely and Jay R. Peck, pp. 13–61. Department of Anthropology, University of Texas at Austin. Submitted to United States Forest Service. On file at the Gila National Forest Office, Silver City, New Mexico.

McGuirt, Michael D. and Leslie H. Hartzell

- 1997 50-80-10-2139 and 50-80-10-2459. In *Imu, Adzes, and Upland Agriculture: Inventory Survey Archaeology in North Hālawā Valley, O`ahu*, vols. 2c and 2d, edited by Department of Anthropology, Bishop Museum, pp. 1–17 and 1–5. Department of Anthropology, Bishop Museum, Honolulu. Submitted to State of Hawaii, Department of Transportation, Honolulu. On file with the State Historic Preservation Division, Honolulu.
- 1998 Chapter 1: Introduction. In *Activities and Settlement in an Upper Valley: Data Recovery and Monitoring Archaeology in North Hālawā Valley, O`ahu*, vol. 1, edited by Department of Anthropology, Bishop Museum, pp. 1–14. Department of Anthropology, Bishop Museum, Honolulu. Submitted to State of Hawaii, Department of Transportation, Honolulu. On file with the State Historic Preservation Division, Honolulu.

McGuirt, Michael D. and Margaret Howard

- 1995 Prehistoric Background. In *Archeological Survey of Tyler State Park, Smith County, Texas*, edited by Margaret Howard, pp. 16–31. Texas Parks and Wildlife Department, Austin. On file with the Texas Historical Commission, Austin, Texas Antiquities Committee Permit No. 1484.

McGuirt, Michael D. and Shannon P. MacPherron

- 1998 50-80-10-2137. In *Activities and Settlement in an Upper Valley: Data Recovery and Monitoring Archaeology in North Hālawā Valley, O`ahu*, vol. 2b, edited by Department of Anthropology, Bishop Museum, pp. 1–86. Department of Anthropology, Bishop Museum, Honolulu. Submitted to State of Hawaii, Department of Transportation, Honolulu. On file with the State Historic Preservation Division, Honolulu.

McGuirt, Michael D. and Deborah I. Olszewski

- 1997 50-80-10-2256. In *Imu, Adzes, and Upland Agriculture: Inventory Survey Archaeology in North Hālawā Valley, O`ahu*, vol. 2d, edited by Department of Anthropology, Bishop Museum, pp. 1–9. Department of Anthropology, Bishop Museum, Honolulu. Submitted to State of Hawaii, Department of Transportation, Honolulu. On file with the State Historic Preservation Division, Honolulu.

Mikesell, Stephen, Michael McGuirt, and Trish Fernandez

- 2007 Introduction to the White Papers in State Historical Resources Commission Archaeology Committee White Papers. *SCA Newsletter* 41(1):18–21.



Sharp, John, Michael D. McGuirt, Jennifer Darcangelo, and Andrea Galvin

2004 *How to Consult with the California SHPO*. Workshop presented on 18 March at the 38th Annual Meeting of the Society for California Archaeology, Riverside, California (4 hours).

#### PROFESSIONAL AND HONORARY ASSOCIATIONS

Register of Professional Archaeologists  
Society for American Archaeology  
Society for California Archaeology  
Honor Society of Phi Kappa Phi

#### REFERENCES AND WRITING SAMPLES


Available upon request.

## DECLARATION OF Amanda Blosser

I, Amanda Blosser, declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Energy Facilities Siting Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepared the staff testimony on Cultural Resources, Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 11/5/08 Signed: 

At: Sacramento, California

# **Amanda Blosser**

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Planner II, California Energy Commission  
1516 9<sup>th</sup> Street  
Sacramento, CA 95814  
916.654.4884  
Ablosser@state.energy.ca.gov

## **Summary of Qualifications**

Ten years experience in the field of historic preservation and cultural resource management. Expertise includes survey of architectural and engineering resources, assessment of effects on historic resources, and preparation of local and state landmark applications.

## **Professional Experience**

California Energy Commission, Planner II, Environmental Office-Facilities Siting, May 2008-present.

Perform technical analysis for complex facility siting cases and planning studies in the area of cultural resources for Applications of Certification and Small Power Plant Exemptions.

California Office of Historic Preservation; Staff Historian II/, Project Review Unit, November 2005- present.

Major responsibilities include reviewing and providing comment, both from an academic and regulatory perspective, on project impacts to cultural resources, assessment of adequacy of reports prepared for review, recommending revisions to submission, and prepare agreement documents to resolve adverse affects to cultural resources, assists federal agencies in completing compliance with National Historic Preservation Act.

JRP Historical Consulting Services, Staff Historian II/Architectural Historian II, October 16, 2001- present.

Major responsibilities include inventory and evaluation of historic resources, preparation of environmental documents and other reports regarding compliance with state and federal environmental regulations and policies, undertaking site specific and general historical research, writing and compiling physical descriptions and integrity assessments of historic resources for historic property surveys, prescribing mitigation measures for historic resources as necessary and completing mitigation measures, assisting or training other staff in historical research methods and techniques. Other work related experience includes client and review agency coordination, project management, approaches, project budgets and schedules, proposals for projects, managing multiple projects and staff members, interaction with clients and various federal, state, and local agencies and the public.

Independent Architectural Historian and Preservation Planner, August 15, 1999-September 15, 2001.

Projects while an independent contractor encompassed preparation of small inventory and evaluation and historic architecture survey reports for city planning organizations and other municipal agencies, preparation of National Register of Historic Places nomination forms,

# Amanda Blosser

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Planner II, California Energy Commission  
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preparation of Federal Tax Credit applications, and authoring land use histories. Additional project work included participating in design guideline recommendations for historic resources during master planning process.

Student Intern, Colonial Williamsburg, Architectural History and Material Conservation Departments, January 21, 1999-April 15, 1999.

Responsibilities included completion of research tasks for staff, undertaking paint analysis, conservation of objects, and preparation of written documentation. All work was undertaken under supervision of Architectural Historians and furniture conservators.

Ft. Davis National Historic Site, Student Architectural Conservator, June 15, 1998-August 15, 1998.

Responsibilities included preparation of written and photographic documentation, conducting condition assessments, undertaking plaster and paint stabilization and consolidation for historic structures within the Ft. Davis National Historic site. All work was undertaken in conjunction with additional architectural conservators and student architectural conservators.

Teaching Assistant, Texas Tech University, Architecture History, January 21, 1998 - May 15, 1998.

## Education

Bachelor of Arts in Art History, University of Texas, Austin, 1995.

Undergraduate Deans' Research Scholarship Recipient, 1995.

Master of Science in Architecture, Historic Preservation, Texas Tech University, 1999.

Thesis: *Paint Analysis at Colonial Williamsburg, An Evolution of Technique.*

Los Rios Community College, GIS Applications certificate, currently enrolled.

## Professional Memberships and Community Activities

Vice-President, Northern California Chapter of the Society of Architectural Historians.

Presenter, "Restoring Wood Windows," September 2005, 2006, 2007 at various locations.

Presenter, "Researching Your Historic Property," *Fainted Ladies Restoration Seminar*, October 16, 2004.

Society of Architectural Historians.

California Garden and Landscape History Society.

## DECLARATION OF Beverly E. Bastian

I, **Beverly E. Bastian**, declare as follows:

1. I am presently employed by The California Energy Commission in the **Siting, Transmission, and Environmental Protection Division** as a **Planner II**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I assisted in the preparation of the staff testimony on **Cultural Resources**, for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 3, 2008 Signed: Beverly E. Bastian  
At: Sacramento, California

**Beverly E. Bastian**  
1516 Ninth Street MS 40  
Sacramento, CA 95814-5504  
(916) 654-4840 email: bbastian@energy.state.ca.us

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**Education**

<b>School</b>	<b>Field</b>	<b>Degree</b>	<b>Year</b>
University of California, Davis	Anthropology	B.A	1967
University of California, Davis	Anthropology	M.A	1969
Tulane University	Anthropology	A.B.D.	1975
University of Mississippi	American History	(courses only)	1989
University of California, Santa Barbara	Public (American) History and Historic Preservation	A.B.D.	1996

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**Experience**

*State of California, California Energy Commission* *2005 to present*  
*Planner II, Energy Facilities Siting Division, Environmental Office, Biological and Cultural Unit,*  
All tasks related to the production of the cultural resources sections of CEQA-equivalent (California Environmental Quality Act) documents for the environmental review of proposed power plants in California, including: Evaluating data in applications; writing data requests to applicants and doing independent research to compile an inventory of and evaluate the historical/cultural significance of cultural resources subject to significant impacts from proposed projects; providing and receiving information in public hearings on applications; analyzing all pertinent data; writing Staff Assessments of impacts; developing mitigation measures to reduce to insignificant any impacts to significant cultural resources; providing expert testimony on my analyses and findings in public hearings; and reviewing compliance with mitigation measures during the construction, operation, and decommissioning of certified power plants. Additional tasks include: providing prefilling assistance to applicants, reviewing the CEQA documents of sister state agencies; consulting and advising cultural resources specialists in sister state agencies; coordinating and reviewing the work of Commission cultural resources consultants; and developing internal procedures and guidelines to improve cultural resources review of applications.

*State of California, Department of Parks and Recreation* *2001 to 2005*  
*Historian II, Cultural Resources Division, Cultural Resources Support Unit*  
Major and complex historical and historic architectural investigations and studies dealing with the significance, integrity, and management of historic buildings, structures, and landscapes in California's state parks; participation in interdisciplinary teams and project assignments; preparation of technical reports and correspondence; inventorying and evaluating historic properties; coordinating the statewide registration of historical properties; assessing the eligibility of historic properties to the National Register of Historic Places and the California Register of Historical Resources; reviewing environmental documents and providing technical analyses of major Departmental projects to determine impacts to cultural resources under State and federal laws; identifying resource issues and constraints; establishing allowable use and development guidelines; developing approaches to protect, enhance, and perpetuate cultural resources under relevant State and federal laws, regulations, and standards; proposing and developing programs, policies, and budgets to meet Department's historic preservation missions.



*Department of Social Sciences, American River College  
Instructor (part-time), American History*

2000 to 2002

Creation and presentation of classroom lectures, selection of assigned texts and readings, creation and administration of quizzes and examinations, assignment and supervision of student research papers, student consultation in office hours, grading of all quizzes, tests, and papers, and assigning final student grades. These research, organizing, and teaching skills demonstrate ability to organize information, to speak effectively to the public, and to train and direct other personnel.

*Department of Sociology and Anthropology, University of Mississippi  
Archaeologist, Center for Archaeological Research*

1987 to 1989

All tasks for the completion of the historical archaeological part of an archaeological survey and testing program final report related to a U. S. Army Corps of Engineers erosion control project in twelve north-central Mississippi counties, including: Coordinating the activities of a field crew and the research of historians working in archives; setting up an artifact database using survey data to generate statistical summaries for discovered historical archaeological sites; gathering historical settlement and land-use data for twelve counties; conducting a special statistical analysis and synthesis of historical data only, focusing on pre-and post-Civil War land tenure and agricultural production for plantations in two counties where soil fertility contrasted; synthesizing data from all sources, collaborating on the final cultural resources management report with archaeologists specializing in prehistory and survey and sampling methodology; presenting findings at the annual meeting of the Society for Historical Archaeology in 1989.

*Gilbert Commonwealth, Inc.*

1984 to 1987

*Historical Archaeologist and Project Manager, Environmental Unit*

All tasks as Principal Investigator for six major historical archaeological and/or historical architectural cultural resources management projects done under contract to federal, state, and local governments, including: Writing winning proposals for these projects; negotiating and managing project budgets; gathering/supervising the gathering of historical, oral historical, and archaeological data; analyzing/supervising the analysis of gathered data; and writing/supervising the writing of reports of findings, along with the creation of maps, illustrations, and data tables for these reports; serving as the historian and historical preservationist on several multidisciplinary teams tasked with siting the routes for several major power lines in east Texas.

*Tennessee Valley Authority (personal services contract)*

1979 to 1981, 1983-1984

*Historical Archaeologist (self-employed)*

All tasks as Principal Investigator for various cultural resources management projects in areas affected by TVA construction, the most significant of which were: the complete excavation of and report on seven nineteenth-century log-cabin sites in Cedar Creek Reservoir in northwestern Alabama; and all historical research, the field work, and the report for the underwater remote-sensing reconnaissance and underwater videotaping of sunken Civil War cargo boats and gunboats at Johnsonville, Tennessee, in the western part of the Tennessee River.

*Other Archaeological Projects*

1966 to 1981

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### **Professional Societies**

Register of Professional Archaeologists, #10683  
Society for Historical Archaeology  
National Council on Public History

Vernacular Architecture Forum  
Society for California Archeology  
California Council for the Promotion of History

**DECLARATION OF**  
**Alvin J. Greenberg, Ph.D.**

I, **Alvin J. Greenberg, Ph.D.** declare as follows:

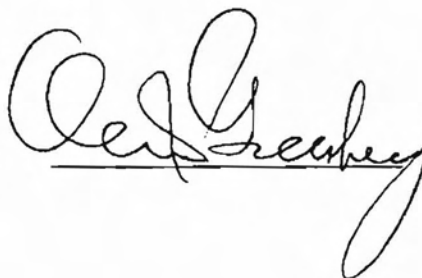
1. I am presently a consultant to the California Energy Commission, Energy Facilities Siting and Environmental Protection Division.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on the **Public Health, Hazardous Materials Management, and Worker Safety/Fire Protection** sections for the **Orange Grove Project** based on my independent analysis of the amendment petition, supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: \_\_\_\_\_

10/31/08

Signed: \_\_\_\_\_



At: \_\_\_\_\_

Sacramento, California



## **Risk Science Associates**

121 Paul Dr., Suite A, San Rafael, Ca. 94903-2047

415-479-7560 fax 415-479-7563

e-mail [agreenberg@risksci.com](mailto:agreenberg@risksci.com)

**Name & Title:**                      **Alvin J. Greenberg, Ph.D., FAIC, REA, QEP**  
   **Principal Toxicologist**

Dr. Greenberg has had over two decades of complete technical and administrative responsibility as a team leader in the preparation of human and ecological risk assessments, air quality assessments, hazardous materials handling and risk management/prevention, infrastructure vulnerability assessments, occupational safety and health, hazardous waste site characterization, interaction with regulatory agencies in obtaining permits, and conducting lead surveys and studies. He has particular expertise in the assessment of dioxins, lead, diesel exhaust, petroleum hydrocarbons, mercury, the intrusion of subsurface contaminants into indoor air, and the preparation and review of public health/public safety sections of EIRs/EISs. Dr. Greenberg's expertise in risk assessment has led to his appointment as a member of several state and federal advisory committees, including the California EPA Advisory Committee on Stochastic Risk Assessment Methods, the US EPA Workgroup on Cumulative Risk Assessment, the Cal/EPA Peer Review Committee of the Health Risks of Using Ethanol in Reformulated Gasoline, the California Air Resources Board Advisory Committee on Diesel Emissions, the Cal/EPA Department of Toxic Substances Control Program Review Committee, and the DTSC Integrated Site Mitigation Committee. Dr. Greenberg is the former Chair of the Bay Area Air Quality Management District Hearing Board, a former member of the State of California Occupational Health and Safety Standards Board (appointed by the Governor), and former Assistant Deputy Chief for Health, California OSHA. And, since the events of 9/11, Dr. Greenberg has been the lead person for developing vulnerability assessments, power plant security programs, and conducting safety and security audits of power plants for the California Energy Commission and has assisted the CEC in the assessment of safety and security issues for proposed LNG terminals. In addition to providing security expertise to the State of California, Dr. Greenberg was the Team Leader and main consultant to the State of Hawaii on the updating of their Energy Emergency Preparedness Plan.

**Years Experience:**    26

### **Education:**

B.S.                      1969    Chemistry, University of Illinois Urbana

Ph.D.                    1976    Pharmaceutical/Medicinal Chemistry, University of California,  
San Francisco

Postdoctoral Fellowship 1976-1979    Pharmacology/Toxicology, University of  
California, San Francisco

Postgraduate Training    1980    Inhalation Toxicology, Lovelace Inhalation  
Toxicology Research Institute, Albuquerque, NM

**Professional Registrations:**

Board Certified as a Qualified Environmental Professional (QEP)  
California Registered Environmental Assessor - I (REA)  
Fellow of the American Institute of Chemists (FAIC)

**Professional Affiliations:**

Society for Risk Analysis  
Air and Waste Management Association  
American Chemical Society  
American Association for the Advancement of Science  
National Fire Protection Association

**Technical Boards and Committee Memberships - Present:**

Squaw Valley Technical Review Committee  
(appointed 1986)

**Technical Boards and Committee Memberships - Past:**

July 1996 – March 2002

Member, Bay Area Air Quality Management District Hearing Board  
(Chairman 1999-2002)

September 2000 – February 2001

Member, State Water Resources Control Board Noncompliant Underground  
Tanks Advisory Group

January 1999 – June 2001

Member, California Air Resources Board Advisory Committee on Diesel  
Emissions

January 1994 - September 1999

Vice-Chairman, State Water Resources Control Board Bay Protection and Toxic  
Cleanup Program Advisory Committee

September 1998

Member, US EPA Workgroup on Cumulative Risk Assessment

April 1997 - September 1997

Member, Cal/EPA Private Site Manager Advisory Committee

January 1986 - July 1996

Member, Bay Area Air Quality Management District Advisory Council  
(Chairman 1995-96)

January 1988 - June 1995

Member: California Department of Toxic Substance Control Site Mitigation  
Program Advisory Group

January 1989 - February 1995

Member: Department of Toxics Substances Control Review Committee, Cal-EPA

October 1991 - February 1992

Chair: Pollution Prevention and Waste Management Planning Task Force of the  
Department of Toxics Substances Control Review Committee, Cal-EPA

September 1990 - February 1991

Member: California Integrated Waste Management Board Sludge Advisory  
Committee

September 1987 - September 1988

ABAG Advisory Committee on Regional Hazardous Waste Management Plan

March 1987 - September 1987

California Department of Health Services Advisory Committee on County and  
Regional Hazardous Waste Management Plans

January 1984 - October 1987

Member, San Francisco Hazardous Materials Advisory Committee

March 1984 - March 1987

Member, Lawrence Hall of Science Toxic Substances and Hazardous Materials  
Education Project Advisory Board

Jan. 1, 1986 - June 1, 1986

Member, Solid Waste Advisory Committee, Governor's Task Force on Hazardous  
Waste

Jan. 1, 1983 - June 30, 1985

Member, Contra Costa County Hazardous Waste Task Force

Sept. 1, 1982 - Feb. 1, 1983

Member, Scientific Panel to Address Public Health Concerns of Delta Water  
Supplies, California Department of Water Resources

### **Present Position**

January 1983- present

Owner and principal with Risk Sciences Associates, a Marin County, California,  
environmental consulting company specializing in multi-media human health and  
ecological risk assessment, air pathway analyses, hazardous materials management-  
infrastructure security, environmental site assessments, review and evaluation of  
EIRs/EISs, preparation of public health and safety sections of EIRs/EISs, and litigation  
support for toxic substance exposure cases.

### **Previous Positions**

Jan. 2, 1983 - June 12, 1984

Member, State of California Occupational Safety and Health Standards Board  
(Cal/OSHA), appointed by the Governor

Aug. 1, 1979 - Jan. 2, 1983

Assistant Deputy Chief for Health, California Occupational Safety and Health  
Administration

Feb. 1, 1979 - Aug. 1, 1979

Administrative Assistant to Chairperson of Finance Committee, Board of Supervisors, San Francisco

Jan. 1, 1976 - Feb. 1, 1979

Research Pharmacologist and Postdoctoral Fellow, Department of Pharmacology and Toxicology, School of Medicine, University of California, San Francisco

Jan. 1, 1975 - Dec. 31, 1975

Acting Assistant Professor, Department of Pharmaceutical Chemistry, University of California, San Francisco

## **Experience**

### **General**

Dr. Greenberg has been a consultant in Hazardous Materials Management and Security, Human and Ecological Risk Assessment, Occupational Health, Toxicology, Hazardous Waste Site Characterization, and Toxic Substances Control Policy for over 26 years. He has broad experience in the identification, evaluation and control of health and environmental hazards due to exposure to toxic substances. His experience includes Community Relations Support and Risk Communication through experience at high-profile sites and presentations at professional society meetings.

He has considerable experience in the review and evaluation of exposure via the air pathway - particularly to emissions from power plants, refineries, and diesel exhaust - and a thorough knowledge of the regulatory requirements through his experience at Cal/OSHA, the BAAQMD Hearing Board, as a consultant to the California Energy Commission, and in preparing such assessments for local government and industry. He has assessed exposures to diesel exhaust during construction and operations of stationary and mobile sources and has testified at evidentiary hearings numerous times on this subject.

He is presently assisting the California Energy Commission in assessing the risks to workers and the public of proposed power plants and LNG terminals in the state. His experience in hazard identification, exposure assessment, risk assessment, occupational safety and health, emergency response, and Critical Infrastructure Protection has made him a valuable part of the CEC team addressing this issue. He has reviewed and commented on the DEIS/DEIR for the proposed SES LNG Port of Long Beach terminal, focusing on security issues for the CEC and on safety matters for the City of Long Beach. He has presented technical information and analysis to the State of California Interagency LNG Working Group on thermal radiation public exposure criteria and safety/security at an east coast urban LNG terminal. (Both presentations are confidential owing to the nature of the material.) He has conducted numerous evaluations of the safety and hazards of natural gas pipelines for the CEC and has presented his findings and recommendations at public meetings and evidentiary hearings.

He served for over five years as the Vice-chair of the California State Water Resources Control Board Advisory Committee convened to address toxic substances in sediments in bays, rivers, and estuaries. He has been a member of the Squaw Valley Technical Review Committee since 1986 establishing chemical application management plans at golf courses to protect surface and

groundwater quality. He has also conducted numerous ecological risk assessments and characterizations, including those for marine and terrestrial habitats.

Dr. Greenberg has extensive experience in data collection and preparation of human and ecological risk assessments on numerous military bases and industrial sites with Cal/EPA DTSC and RWQCB oversight. He has also been retained to provide technical services to the Cal/EPA Department of Toxic Substances Control (preparation of human health risk assessments) and the Office of Environmental Health Hazard Assessment (review and evaluation of air toxics health risk assessments and preparation of profiles describing the acute and chronic toxicity of toxic air contaminants). He has also conducted several surveys of sites containing significant lead contamination from various sources including lead-based paint, evaluated potential occupational exposure to lead dust and fumes in industrial settings, prepared numerous human health risk assessments of lead exposure, and prepared safety and health plans for remedial investigation of lead contaminated soils. Dr. Greenberg is also a recognized expert on the requirements of California's Proposition 65 and has served as an expert on Prop. 65 litigation.

### **Liquefied Natural Gas (LNG)**

Dr. Greenberg assisted the CEC in the preparation of the "background" report on the risks and hazards of siting LNG terminals in California ("LNG in California: History, Risks, and Siting" July 2003) and consulted for the City of Vallejo on a proposed LNG terminal and storage facility at the former Mare Island Naval Shipyard. He has also conducted an evaluation and prepared comments on the risks, hazards, and safety analysis of the DEIS/DEIR for the City of Long Beach on a proposed LNG terminal at the Port of Long Beach (POLB) and conducted an analysis on vulnerability and critical infrastructure security for the CEC on this same proposed LNG terminal. He currently advises the CEC on the POLB LNG proposal on risks, hazards, human thresholds of thermal exposure, vulnerability, security, and represented the CEC at a U.S. Coast Guard briefing on the Waterway Suitability Assessment that included the sharing of SSI (Sensitive Security Information). He has presented technical information and analysis to the State of California LNG Interagency Working Group on thermal radiation public exposure criteria and safety/security at an east coast urban LNG terminal. (Both presentations are confidential owing to the nature of the material.) He has conducted numerous evaluations of the safety and hazards of natural gas pipelines for the CEC and has presented his findings and recommendations at public meetings and evidentiary hearings.

### **Infrastructure Security**

Since 2002, Dr. Greenberg has been trained by and is working with the Israeli company SB Security, LTD, the most experienced and tested security planning and service company in the world. Since the events of 9/11, Dr. Greenberg has been the lead person for developing vulnerability assessments and power plant security programs for the California Energy Commission (CEC). In taking the lead for this state agency, Dr. Greenberg has interfaced with the California Terrorism Information Center (CATIC) and provided analysis, recommendations, and testimony at CEC evidentiary hearings regarding the security of power plants within the state. These analyses include the assessment of Critical Infrastructure Protection, threat assessments, criticality assessments, and the preparation of vulnerability assessments and off-site consequence analyses addressing the use, storage, and transportation of hazardous materials, recommendations for security to reduce the threat from foreign and domestic terrorist activities, perimeter security, site access by personnel and vendors, personnel background checks,

management responsibilities for facility security, and employee training in security methods. Dr. Greenberg is the lead person in developing a model power plant security plan, vulnerability assessment matrix, and a security training manual for the CEC. The model security plan is used by power plants in California as guidance in developing and implementing security measures to reduce the vulnerability of California's energy infrastructure to terrorist attack. He has testified at several evidentiary hearings for the CEC on power plant security issues. He also leads an audit team conducting safety and security audits at power plants throughout California that are under the jurisdiction of the CEC. In addition to providing security expertise to the State of California, in August 2004, a team of experts led by Dr. Greenberg was awarded an 18-month contract by the State of Hawaii to update and improve the state's Energy Emergency Preparedness Plan and make recommendations for increased security of critical energy infrastructure on this isolated group of islands.

### **Air Pathway Analysis**

Dr. Greenberg has prepared numerous Air Pathway Analyses and human health risk assessments, evaluating exposure at numerous locations in California, Hawai'i, Oregon, Minnesota, Michigan, and New York. He is experienced in working with Region IX EPA, the State of California DTSC, and the Hawai'i Department of Health Clean Air Branch in the application of both site-specific and non site-specific health risk assessment criteria.

### **Examples**

Human Health Risk Assessment for the Open Burn/Open Detonation Operation at McCormick Selph, Inc., Hollister, Ca. (June 2003)

Air Quality and Human Health Risk Assessment for the Royal Oaks Industrial Complex, Monrovia, Ca. (January 2003)

Human Health Risk Assessment and Indoor Vapor Intrusion Assessment for the former Pt. St. George Fisheries Site, Santa Rosa, Ca. (October 2002)

Human Health Risk Assessment for the former Sargent Industries Site, Huntington Park, Ca. (July 2001)

Ballard Canyon Air Pathway Analysis and Human Health Risk Assessment, Santa Barbara County, Ca. (September 2000)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)

The Avila Beach Health Study Phase 1: Reconnaissance Sampling Findings, Conclusions, and Recommendations. (July 1997) Volume 1: Baseline Human Health Risk Assessment. (May 1998)

The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Health Risk Assessment and Air Pathway Analysis for the Ballard Canyon Landfill, Santa Barbara County, Ca. (March 1999)



Human Health Risk Assessment, Teledyne Ryan Aeronautical, McCormick Selph Ordnance. Hollister, California. (December 1996)

Initial Phase Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (October 1996)

Human Health Risk Assessment for Current and Proposed Expanded Class II and Class III Operations at the Altamont Sanitary Landfill, Alameda County, Ca. (March, 1993)

Focused Ecological Risk Characterization, Hawaiian Electric Company, Keahole Generating Station Expansion, Hawai'i (June 1993)

Human Health Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawai'i Office of Space Industry (April 1993)

Ecological Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawai'i Office of Space Industry (March 1993)

Human Health Risk Assessment Due to Emissions from a Medical Waste Incinerator, prepared for Kauai Veterans Memorial Hospital, Kauai, Hawai'i (1994)

Cancer Risk Assessment for the H-Power Generating Station, Campbell Industrial Park, Oahu, Hawai'i (1988)

**Hazardous Materials Assessments, Waste Management Assessments, Worker Safety and Fire Protection Assessments, and Public Health Impacts Assessments**

Dr. Greenberg also has significant experience as a consultant and expert witness for the California Energy Commission providing analysis, recommendations, and testimony in the areas of hazardous materials management, process safety management, waste management, worker safety and fire protection, and public health impacts for proposed power plant/cogeneration facilities. These analyses include the evaluation and/or preparation of the following:

- Off-site consequence analyses of the handling, use, storage, and transportation of hazardous materials,
- Risk Management Plans (required by the Cal-ARP) and Business Plans (required by H&S Code section 25503.5),
- Safety Management Plans (required by 8 CCR section 5189),
- Natural gas pipeline safety,
- Solid and hazardous waste management plans,
- Phase I and II Environmental Site Assessments,
- Construction and Operations Worker Safety and Health Programs,
- Fire Prevention Programs,
- Human health risk assessment from stack emissions and from diesel engines, and
- Mitigation measures to address PM exposure, including diesel particulates

**Examples**

- San Francisco Energy Reliability Project, San Francisco, Ca. 2004-present. Hazardous materials management, worker safety/fire protection, waste management, public health
- Inland Empire Energy Center, Romoland, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
- Malburg Generating Station Project, City of Vernon, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
- Blythe II, Blythe, Ca. 2002-3. hazardous materials, worker safety/fire protection,
- Palomar Energy Center, Escondido, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
- Cosumnes Power Project, Rancho Seco, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
- Tesla Power Project, Tesla, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
- San Joaquin Valley Energy Center, San Joaquin, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management
- Morro Bay Power Plant, Morro Bay, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
- Potrero Power Plant Unit 7, San Francisco, Ca., 2001-2: hazardous materials, worker safety/fire protection
- El Segundo Power Redevelopment Project, El Segundo, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
- Rio Linda Power Project, Rio Linda, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Pastoria II Energy Facility Expansion, Grapevine, Ca., 2001: hazardous materials, worker safety/fire protection
- East Altamont Energy Center, Byron, Ca., 2001-2: hazardous materials, worker safety/fire protection
- Magnolia Power Project, Burbank, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Russell City Energy Center, Hayward, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
- Woodbridge Power Plant, Modesto, Ca., 2001: hazardous materials, worker safety/fire protection, waste management
- Colusa Power Plant Project, Colusa County, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Valero Refinery Cogeneration Project, Benicia, Ca., 2001: hazardous materials, worker safety/fire protection
- Ocotillo Energy Project, Palm Springs, Ca., 2001: hazardous materials, worker safety/fire protection
- Gilroy Energy Center Phase II Project, Gilroy, Ca., 2001-2: hazardous materials, worker safety/fire protection
- Los Esteros Critical Energy Facility, San Jose, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Roseville Energy Facility, Roseville, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health

- Spartan Power, San Jose, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Inland Empire Energy Center, Romoland, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- South Star Cogeneration Project, Taft, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Tesla Power Plant, Eastern Alameda County, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Tracy Peaker Project, Tracy, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Henrietta Peaker Project, Kings County, Ca., 2001: hazardous materials, worker safety/fire protection, waste management, public health
- Central Valley Energy Center, San Joaquin, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Cosumnes Power Plant, Rancho Seco, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Los Banos Voltage Support Facility, Western Merced County, Ca., 2001-2: waste management, public health
- Palomar Energy Project, Escondido, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
- Metcalf Energy Center, San Jose, Ca., 2000-1: hazardous materials
- Blythe Power Plant, Blythe, Ca., 2000-1: hazardous materials
- San Francisco Energy Co. Cogeneration Project, San Francisco, Ca., 1994-5: hazardous materials
- Campbell Soup Cogeneration Project, Sacramento, Ca., 1994: hazardous materials
- Proctor and Gamble Cogeneration Project, Sacramento, Ca., 1993-4: hazardous materials
- San Diego Gas and Electric South Bay Project, Chula Vista, Ca., 1993: hazardous materials
- SEPCO Project, Rio Linda, Ca., 1993: hazardous materials
- Shell Martinez Manufacturing Complex Cogeneration Project, Martinez, Ca., 1993: hazardous materials and review and evaluation of EIR
- SFERP Project, San Francisco, Ca. 2004 – 2006. hazardous materials, worker safety/fire protection, waste management, public health

### **Occupational Safety and Health/Health and Safety Plans/Indoor Air Quality**

Dr. Greenberg has significant experience in occupational safety and health, having directed the development, adoption, and implementation of over 50 different Cal/OSHA regulations, including airborne contaminants (>450 substances), lead, asbestos, confined spaces, and worker-right-to-know (MSDSs). He has conducted numerous occupational health surveys and has extensive experience in the sampling and analysis of indoor air quality at residences, workplaces, and school classrooms. He is currently the team leader conducting safety and security audits at power plants throughout California for the California Energy Commission. Safety issues audited include compliance with regulations addressing several safety matters, including but not limited to, confined spaces, lockout/tagout, hazardous materials, and fire prevention/suppression equipment.

## **Examples**

Review and Evaluation of Public and Worker Safety Issues at the proposed SES LNG Facility, Port of Long Beach. prepared for the City of Long Beach. (November 2005)

Confidential safety and security audit reports for 18 power plants in California. prepared for the California Energy Commission. (January 2005 through March 2006)

Report on the Accidental release and Worker Exposure to Anhydrous Ammonia at the BEP I Power Plant, Blythe, Ca. prepared for the California Energy Commission. (October 2004)

Investigation of a Worker Death in a Confined Space, La Paloma Power plant. prepared for the California Energy Commission. (July 2004)

Preliminary Report on Indoor Air Quality in Elementary School Portable Classrooms, Marin County, Ca. (December 1999)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)

Air Pathway Analysis for the Ballard Canyon Landfill. Submitted to the County of Santa Barbara, (March 1999)

Review and Evaluation of the Health Risk Assessment for Outdoor and Indoor Exposures at the Former Golden Eagle Refinery Site, Carson, Ca. (May 1998)

The Avila Beach Health Study Phase 1: Reconnaissance Sampling Findings, Conclusions, and Recommendations. (July 1997) Volume 1: Baseline Human Health Risk Assessment. (May 1998)

The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Phase 2 Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (February 1997)

Determination of Occupational Lead Exposure at a Tire Shop in Placerville, Ca. (April 1993)

Development of an Environmental Code of Regulations for Hazardous Waste Treatment Facilities on La Posta Indian Tribal lands, San Diego County, Ca. (August 1992)

Sampling and Analysis Plan, Health and Safety Plan, Site Characterization of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (September 2, 1988)

## **Sites with RWQCB and/or DTSC Oversight**

Dr. Greenberg has specific experience in assessing human health and ecological risks at contaminated sites at the land/water interface, including petroleum contaminants, metals, mercury, and VOCs at several locations in California including Oxnard, Richmond, Avila Beach, Mare Island Naval Shipyard, San Diego, Hollister, San Francisco, Hayward, Richmond, the Port of San Francisco, and numerous other locations. He has used Cal/EPA methods, US EPA

methods, and ASTM Risk Based Corrective Action (RBCA) and Cal/Tox methodologies. He is extremely knowledgeable about SWRCB and SF Bay RWQCB regulations on underground storage tank sites and with ecological issues presented by contaminated sediments including sediment analysis, toxicity testing, tissue analysis, and sediment quality objectives. Dr. Greenberg served on the State Water Resources Control Board Bay Protection and Toxic Cleanup Program Advisory Committee from 1994 until the end of the program in 1999.

Dr. Greenberg experience on many of these contaminated sites has been as a consultant to local governments, state agencies, and citizen groups. He assisted the City and County of San Francisco in developing local ordinance requiring soil testing (Article 20, Maher ordinance) and hazardous materials use reporting (Article 21, Walker ordinance). He served as the City of San Rafael's consultant to provide independent review and evaluation of the site characterization and remedial action plan prepared for a former coal gasification site. He was a consultant to a citizen group in northern California regarding exposure and risks due to accidental releases from a petroleum refinery and assisted in the assessment of risks due to crude petroleum contamination of a southern California beach. He has prepared a number of risk assessments addressing crude petroleum, diesel and gasoline contamination, including coordinating site investigations, environmental monitoring, and health risk assessment for the County of San Luis Obispo regarding Avila Beach subsurface petroleum contamination. That high-profile project lasted for over one year and Dr. Greenberg managed a team of experts with a budget of \$750,000. Another high-profile project included the preparation of an extensive comprehensive human and ecological risk assessment for the Hawaii Office of Space Industry on rocket launch impacts and transportation/storage of rocket fuels at the southern end of the Big Island of Hawaii. Dr. Greenberg's risk assessments were part of the EIS for the project. Dr. Greenberg also worked on another high-profile project conducting Air Pathway Analysis of off-site and on-site impacts from landfill gas constituents, including indoor and outdoor air measurements, air dispersion modeling, flux chamber investigations, and health risk assessment for the County of Santa Barbara. Dr. Greenberg has conducted RI/FS work, prepared health risk assessments, evaluated hazardous waste sites and hazardous materials use at numerous locations in California, Hawaii, Oregon, Minnesota, Michigan, and New York. He has considerable experience in the development of clean-up standards and the development of quantitative risk assessments for site RI/FS work at CERCLA sites, as well as site closures, involving toxic substances and petroleum hydrocarbon wastes. He is experienced in working with both Region IX EPA and the State of California DTSC in negotiating clean-up standards based on the application of both site-specific and non site-specific health and ecological based clean-up criteria. He has significant experience in the development of site chemicals of concern list, quantitative data quality levels, site remedial design, the site closure process, the design and execution of data quality programs and verification of data quality prior to its use in the decision making process on large NPL sites.

### **Examples**

The Avila Beach Health Study Phase 1: Reconnaissance Sampling Findings, Conclusions, and Recommendations. (July 1997) Volume 1: Baseline Human Health Risk Assessment. (May 1998)

The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Health Risk Assessment and Air Pathway Analysis for the Ballard Canyon Landfill, Santa Barbara County, Ca. (March 1999)

Screening Human Health Risk Assessment, Calculation of Soil Clean-up Levels, and Aquatic Ecological Screening Evaluation, Galilee Harbor, Sausalito, Ca. (May 1998)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)

Health Risk Assessment for Residual Mercury at the Deer Creek Facility, 3475 Deer Creek Road, Palo Alto, California. (July 1997)

Phase 2 Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (February 1997)

Human Health Risk Assessment, Teledyne Ryan Aeronautical, McCormick Selph Ordnance. Hollister, California. (December 1996)

Initial Phase Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (October 1996)

Human Health Risk Assessment, Ecological Screening Evaluation, and Development of Proposed Remediation Goals for the Flair Custom Cleaners Site, Chico, California (January 1996)

Human Health Risk Assessment for the X-3 Extrudate Project at Criterion Catalyst, Pittsburg, Ca. (November 1994)

Screening Health Risk Assessment and Development of Proposed Soil Remediation Levels at Hercules Plant #3, Culver City, Ca. (July 1993)

Ecological Screening Evaluation for the Altamont Landfill, Alameda County, Ca. (June, 1993)

Focused Ecological Risk Characterization, Hawaiian Electric Company, Keahole Generating Station Expansion, Hawaii (June 1993)

Human Health Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawaii Office of Space Industry (April 1993)

Ecological Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawaii Office of Space Industry (March 1993)

Human Health Risk Assessment for Current and Proposed Expanded Class II and Class III Operations at the Altamont Sanitary Landfill, Alameda County, Ca. (March, 1993)

Screening Health Risk Assessment for the Proposed Expansion of the West Marin Sanitary Landfill, Point Reyes Station, Ca. (March, 1993)

Health Risk Assessment for the Proposed Expansion of the Forward, Inc. Landfill, Stockton, Ca. (September 14, 1992)



Health Risk Assessment for the Rincon Point Park Project, San Francisco, Ca. Prepared for Baseline Environmental Consulting and the San Francisco Redevelopment Agency. (August 10, 1992)

Health Risk Assessment for the South Beach Park Project, San Francisco, Ca. Prepared for Baseline Environmental Consulting and the San Francisco Redevelopment Agency. (August 10, 1992)

Screening Health Risk Assessment and Development of Proposed Soil and Groundwater Remediation Levels, Kaiser Sand and Gravel, Mountain View, Ca. Prepared for Baseline Environmental Consulting (January 30, 1992)

Development of Proposed Soil Remediation Levels for the Marine Corps Air-Ground Combat Center, 29 Palms, California (May 30, 1991)

Preliminary Health Risk Assessment for the City of Pittsburg Redevelopment Agency, Pittsburg, California (May 29, 1991)

### **Military Bases**

Dr. Greenberg has experience in conducting assessments at DOD facilities, including RI/FS work, preparation of health risk assessments, evaluation of hazardous waste sites and hazardous materials use at the following Navy sites in California: San Diego Naval Base; Marine Corps Air-Ground Combat Center, 29 Palms; Mare Island Naval Shipyard, Vallejo; Treasure Island Naval Station, San Francisco, Hunters Point Naval Shipyard, San Francisco, and the Marine Corps Logistics Base, Barstow. He worked with the U.S. Navy and the U.S. EPA in the implementation of Data Quality Objectives (DQO's) at MCLB, Barstow.

### **Examples**

Review and Evaluation of the Remedial Investigation Report and Human Health Risk Assessment for the U. S. Naval Station at Treasure Island, Ca. (June 1999)

Screening Health Risk Assessment for the Proposed San Francisco Police Department's Helicopter Landing Pad at Hunters Point Shipyard, San Francisco, Ca. (September 1997)

Development of Proposed Soil Remediation Levels for the Marine Corps Air-Ground Combat Center, 29 Palms, California (May 30, 1991)

Health Risk Assessment for the Chrome Plating Facility, Mare Island Naval Shipyard, Vallejo, California (October 24, 1988)

Background Levels and Health Risk Assessment of Trace Metals present at the Naval Petroleum Reserve No.1, 27R Waste Disposal Trench Area, Lost Hills, California (August 12, 1988)

RCRA Facility Investigation (RFI) Work Plan of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (August 14, 1989)

Hazardous Waste and Solid Waste Audit and Management Plan, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (July 3, 1989)

Water Quality Solid Waste Assessment Test (SWAT) Proposal RCRA Landfill, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (October 31, 1988)

Waste Disposal Facilities, Waste Haulers, Waste Recycling Facilities Report, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (September 22, 1988)

Sampling and Analysis Plan, Health and Safety Plan, Site Characterization of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (September 2, 1988)

Air Quality Solid Waste Assessment Test (SWAT) Proposal, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (August 25, 1988)

### **Mercury Contamination**

Dr. Greenberg has prepared and/or reviewed several human health and ecological risk assessments regarding mercury contamination in soils, sediments, and indoor surfaces. Dr. Greenberg served on the State Water Resources Control Board Bay Protection and Toxic Cleanup Program Advisory Committee from 1994 until the end of the program in 1999.

### **Examples**

Review and evaluation of a human health risk assessment of ingestion of sport fish caught from San Diego Bay and which contain tissue levels of mercury and PCBs (November 2004 – present)

Screening Human Health Risk Assessment, Calculation of Soil Clean-up Levels, and Aquatic Ecological Screening Evaluation, Galilee Harbor, Sausalito, Ca. (May 1998)

Health Risk Assessment for Residual Mercury at the Deer Creek Facility, 3475 Deer Creek Road, Palo Alto, California. (July 1997)

Human Health Risk Assessment Due to Emissions from a Medical Waste Incinerator, prepared for Kauai Veterans Memorial Hospital, Kauai, Hawai'i (1994)

## DECLARATION OF

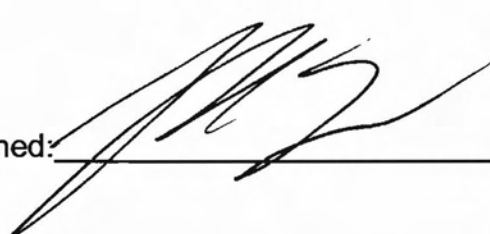
Rick Tyler

I, Rick Tyler declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Energy Facilities Siting Division as a Senior Mechanical Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 11/4/08

Signed: 

At: Sacramento, California

RICK TYLER

Associate Mechanical Engineer

CALIFORNIA ENERGY COMMISSION

EDUCATION B.S., Mechanical Engineering, California State University, Sacramento. Extra course work in Statistics, Instrumentation, Technical Writing, Management; Toxicology, Risk Assessment, Environmental Chemistry, Hazardous Materials Management, Noise Measurement, and regulations regarding control of toxic substances.

Near completion of course work necessary to obtain a certificate in hazardous materials management from University of California, Davis.

EXPERIENCE

Jan. 1998-  
Present California Energy Commission - Senior Mechanical Engineer  
Energy Facility Siting and Environmental Protection Division

Responsible for review of Applications for Certification (applications for permitting) for large power plants including the review of handling practices associated with the use of hazardous and acutely hazardous materials, loss prevention, safety management practices, design of engineered equipment and safety systems associated with equipment involving hazardous materials use, evaluation of the potential for impacts associated with accidental releases and preparation and presentation of expert witness testimony and conditions of certification. Review of compliance submittals regarding conditions of certifications for hazardous materials handling, including Risk Management Plans Process Safety Management.

April 1985-  
Jan. 1998 California Energy Commission - Health and Safety  
Program Specialist; Energy Facility Siting and Environmental Protection Division.

Responsible for review of Public Health Risk Assessments, air quality, noise, industrial safety, and hazardous materials handling of Environmental Impact Reports on large power generating and waste to energy facilities, evaluation of health effects data related to toxic substances, development of recommendations regarding safe levels of exposure, effectiveness of measures to control criteria and non-criteria pollutants, emission factors, multimedia exposure models. Preparation of testimony providing Staff's position regarding public health, noise, industrial safety, hazardous materials handling, and air quality issues associated with proposed power plants. Advise Commissioners, Management, other Staff and the public regarding issues related to health risk assessment of hazardous materials handling.

Nov. 1977-  
April 1985

California Air Resources Board - Engineer (last 4 years Associate level)

Responsible for testing to determine pollution emission levels at major industrial facilities; including planning, supervision of field personnel, report preparation and case development for litigation; evaluate, select and acceptance-test instruments prior to purchase; design of instrumentation systems and oversight of their repair and maintenance; conduct inspections of industrial facilities to determine compliance with applicable pollution control regulations; improved quality assurance measures; selected and programmed a computer system to automate data collection and reduction; developed regulatory procedures and the instrument system necessary to certify and audit independent testing companies; prepared regulatory proposals and other presentations to classes at professional symposia and directly to the Air Resources Board at public hearings. As state representative, coordinated efforts with federal, local, and industrial representatives.

PROFESSIONAL  
AFFILIATIONS/  
LICENSES

Past President, Professional Engineers in California  
Government Fort Sutter Section;  
Past Chairman, Legislative Committee for Professional Association of Air Quality Specialists. Have passed the Engineer in Training exam.

PUBLICATIONS,  
PROFESSIONAL  
PRESINTATIONS  
AND  
ACCOMPLISHMENTS

Authored staff reports published by the California  
Air Resources Board and presented papers regarding  
continuous emission monitoring at symposiums.

Authored a paper entitled "A Comprehensive Approach to Health Risk Assessment", presented at the New York Conference on Solid Waste Management and Materials Policy.

Authored a paper entitled "Risk Assessment A Tool For Decision Makers" at the Association of Environmental Professionals AEP Conference on Public Policy and Environmental Challenges.

Conducted a seminar at University of California, Los Angeles for the Doctoral programs in Environmental Science and Public Health on the subject of "Health Risk Assessment".

Authored a paper entitled "Uncertainty Analysis -An Essential Component of Health Risk Assessment and Risk Management" presented at the EPA/ORNL expert workshop on Risk Assessment for Municipal Waste Combustion: Deposition, Uncertainty, and Research Needs.

Presented a talk on off-site consequence analysis for extremely hazardous materials releases. Presented at the workshop for administering agencies conducted by the City of Los Angeles Fire Department.

Evaluated, provided analysis and testimony regarding public health and hazardous materials management issues associated with the permitting of more than 20 major power plants throughout California.

Developed Departmental policy, prepared policy documents, regulations, staff instruction, and other guidance documents and reference materials for use in evaluation of public health and hazardous materials management aspects of proposed power plants.

Project Manager on contracts totaling more than \$500,000.

RES.RT



## DECLARATION OF

Robert Fiore

I, Robert Fiore, declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Energy Facilities Siting Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: \_\_\_\_\_

11/4/08

Signed: \_\_\_\_\_



At: \_\_\_\_\_

Sacramento, California

# Robert Fiore

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**OBJECTIVE:** PLANNING/ ENVIRONMENTAL PLANNING/ MILITARY PLANNING

## EMPLOYMENT HISTORY

Oct. 2004 - March 2008	Aug. 2002 - Oct. 2004	June 1998 - Aug. 2002	Jan. 1990 - Jan. 1998
Senior Forward Planner	Planning Project Manager	Planner/ Financial Analyst	Principal Regional Planner
Frayji Design Group, Inc. Roseville, CA 95678	R&B Engineering Auburn CA 95603	Berryman & Henigar Pleasanton, CA 94588	Los Angeles County Los Angeles, CA 90012

## QUALIFICATIONS

### **Senior Forward Planner and Project Manager:**

#### **Projects:**

- AG Spanos' Atlas Tract, a 5,000 unit age-restricted residential project with significant levy infrastructure design, planning and permitting;
- Lincoln Crossing & Marketplace, a 2,900 d/u community featuring a commercial power center, nature preserves, and other recreational amenities;
- Village-1 Specific Plan, a 1,800 acre sustainable concept village planned for 3,500 dwelling units, mixed use urban core and institute new urban principles;
- Bickford Ranch Specific Plan, a 2,000 d/u Hillside Master Planned Community;
- Ceronix Gaming Business Park, a 1.5 million sq. ft. industrial complex;
- Stone Point Center, five building office complex;

#### **Responsibilities:**

- Assemble and lead interdisciplinary project teams consisting of planners, engineers, architects, consultants and technicians to develop large-scale master planned communities;
- Direct projects from pre-acquisition, through site assessment and project approval, to construction by coordinating external and internal acquisition, planning, design and construction departments or consultants; Due diligence and site assessments;
- Analyze environmental effects and impacts of infrastructure systems
- Calculate development costs and manage multi-million dollar project budgets;
- Solve problems related to site and infrastructure design, soils, traffic, environmental impacts, utility placement, housing, recreation, architecture, landscaping, rights-of-way, etc;
- Perform policy analyses and revamp policies and procedures;
- Establishing, monitor and track contracts, budgets and schedules; Create useful action plans to ensure project buildout;
- Business development, marketing and client servicing; Invoicing and contract closeout;
- Hire, train and direct staff; Integrate technology to improve production and product;
- Establish schedules and budgets and prepare and review proposals and RFP's;
- Facilitate and foster public and governmental relations;
- Negotiate agreements with government and quasi-governmental agencies;
- Establish basis for matters like proper land use distribution, accessibility and aesthetics;
- Prepare environmental assessments and documentation in compliance with NEPA/ CEQA;
- Obtain Clean Water (404) and Endangered Species (1601) permits, Water Quality Certifications and other similar approvals; Wetland mitigation;
- Process entitlements and propose strategies to resolve complex issues;
- Day to day management of complex and controversial siting of infrastructure and facilities;

### **Planner- Financial Analyst:**

#### **Projects:**

- USCG MLC PAC Planning Proposals and Facility Master Plans (USCG Stations Neah Bay, Vallejo and Morro Bay and the USCG Concord/ Novato Housing Study and Master Plan);
- Managed the formation of assessment districts and administered the East Bay Regional Parks Assessment District, San Joaquin Area Flood Control Agency Assessment District, Livermore Community Facilities District, developer initiated Mello-Roos and Landscape and Lighting

Robert Fiore - 2133 Knapton Way, Roseville, CA 95747  
925-989-0735 - goldriverrunnin@gmail.com

# **Robert Fiore**

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Districts and other similar special tax districts; Also, performed infrastructure planning and permitting;

- City limits expansion and infrastructure feasibility analysis for Murrieta, CA
- CALPINE generation and transmission expansion, planning and permitting;
- Contra Costa County Sewer Mainline replacement and expansion;

## **Responsibilities;**

- Facility assessments and survey, total ownership costs, life cycle costs, alternatives evaluation and recommendations;
- Promote and gain support for multi-million dollar bonds and assessments;
- Calculate costs/ apportionments and integrate databases;
- Ensure Federal, State and Local regulatory compliance;
- Perform trend analysis and forecasting, socio-economic data research, needs assessments, fiscal studies, infrastructure inventory analysis, fee studies and feasibility studies;
- Prepare and present reports and position papers for Military and Congressional Staff, County Supervisors and City Councils;

## **Principal Regional Planner:**

### **Projects;**

- Stevenson Ranch Specific Plan, a multi-use master planned community that included freeway interchanges and highway serving commercial projects, "big-box" and neighborhood commercial centers, several thousand homes split among large lot communities;
- Calabasas Hills, a 500 unit master planned community with wildlife corridor;
- Malibu Terrace, an upscale coastal community;
- Newhall Ranch, new urban concept, integrate social interests to master planned communities;
- Individual residences in view sheds and parcel maps in coastal areas;
- Many subdivisions, zone changes, conditional use permits, environmental review, etc.
- Redevelopment near existing incorporated cities;
- Major public infrastructure projects – Highway 101 Bridge and ROW expansion;

### **Responsibilities**

- Oversee the proper development of large-scale and multi-use development projects;
- Initiate and/ or oversee policy document development and prepare and interpret ordinances;
- Make presentations, manage meetings and engage community, staff and stakeholders to gain consensus;
- Increase reliability through planning and proper presentation preparation;
- Experienced public and media relations;
- Problem solve through sound reason, judgment and expertise;
- Manage department budget and assign tasks; Hire and train junior staff and enable junior staff to meet goals; Ensure production and accountability;
- Prepare policy analyses and recommendations for action, plans, and budget proposals
- Capital improvement, aviation and emergency planning;
- Manage specific plan, land development regulation and design guideline preparation;
- Manage and/ or prepare reports analyzing impacts from development projects and ensure compliance with CEQA and NEPA and the CA Map Act;
- Assess environment and public facilities impacts associated with development and report findings to make recommendations; Prepare and present reports to the RPC & Supervisors;
- Traffic studies, biological reports, cultural and historic reports and site and architectural design
- Wrote elements of the County's General Plan, Zoning Regulations and Development Standards; Wrote portions of EIR's and EIS's;
- Perform traffic analysis of transportation models to maximize routing efficiency and reduce expenditures; Analyzed traffic studies to calculate cost participation for traffic system and control improvements; Acquire property and ROW through negotiations, eminent domain and condemnation;
- Expedite and track entitlements, improvement plans and final maps;

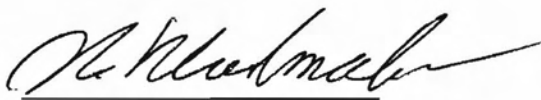
## DECLARATION OF SHAHAB KHOSHMAHRAB

I, **SHAHAB KHOSHMAHRAB**, declare as follows:

1. I am presently employed by the California Energy Commission in the **ENGINEERING OFFICE** of the Facilities Siting Division as a **MECHANICAL ENGINEER**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I participated in the preparation of the staff testimony on **NOISE AND VIBRATION**, for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 29, 2008

Signed: 

At: Sacramento, California

**Shahab Khoshmashrab**  
Mechanical Engineer

**Experience Summary**

Nine years experience in the Mechanical, Civil, Structural, and Manufacturing Engineering fields involving engineering and manufacturing of various mechanical components and building structures. This experience includes QA/QC, construction/licensing of electric generating power plants, analysis of noise pollution, and engineering and policy analysis of thermal power plant regulatory issues.

**Education**

- California State University, Sacramento-- Bachelor of Science, Mechanical Engineering
- Registered Professional Engineer (Mechanical), California

**Professional Experience**

**2001-2004--**Mechanical Engineer, Systems Assessment and Facilities Siting-- California Energy Commission

Performed analysis of generating capacity, reliability, efficiency, noise and vibration, and the mechanical, civil/structural and geotechnical engineering aspects of power plant siting cases.

**1998-2001--**Structural Engineer -- Rankin & Rankin

Engineered concrete foundations, structural steel and sheet metal of various building structures including energy related structures such as fuel islands. Performed energy analysis/calculations of such structures and produced structural engineering detail drawings.

**1995-1998--**Manufacturing Engineer -- Carpenter Advanced Technologies

Managed manufacturing projects of various mechanical components used in high tech medical and engineering equipment. Directed fabrication and inspection of first articles. Wrote and implemented QA/QC procedures and occupational safety procedures. Conducted developmental research of the most advanced manufacturing machines and processes including writing of formal reports. Developed project cost analysis. Developed/improved manufacturing processes.

## DECLARATION OF

Amanda Stennick

I, **Amanda Stennick** declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Energy Facilities Siting Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on Socioeconomic Resources for the Orange Grove Energy Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 28, 2008 Signed: Amanda Stennick

At: Sacramento, California



## AMANDA STENNICK

### EDUCATION

B.A. 1986 University of California, Davis, Urban and Economic Geography

### WORK EXPERIENCE

April 1998  
present **Planner II.** California Energy Commission, Energy Facilities Siting and Protection Division.

Provide technical analysis of proposed energy planning, conservation, and development programs on land use and socioeconomic resources. Specific tasks include the analysis of potential land use and socioeconomic impacts, identification of mitigation measures, presentation of oral and written testimony for hearings on siting cases, and project monitoring to ensure compliance with local, state and federal environmental laws and regulations. Recent work includes preparation of agenda and other materials for staff's environmental justice training seminar; research in the areas of demographics and poverty for environmental justice in siting cases; review of environmental justice legislation; research on energy and environmental justice issues specific to US/Mexico Border; as part of a team, authored the 2000 Quality Control Responsibilities for Division Products; authored the Environmental Justice sections for the 2001, 2003, and 2005 Environmental Performance Report; technical lead for land use section for 2005 Environmental Performance Report; CEQA review and comment on Cabrillo LNG Deepwater Port Facility NOI/NOP, City of Pittsburg Trans Bay Cable Project, and EIS/EIR for LNG facility in the Port of Long Beach.

Oct. 1993  
to April 1998 **Planner I.** California Energy Commission, Energy Facilities Siting and Protection Division.

Provide technical analysis of proposed energy planning, conservation, and development programs on land use and socioeconomic resources. Specific tasks include the analysis of potential impacts, identification of mitigation measures, presentation of oral and written testimony for public hearings on siting cases, and project monitoring to ensure compliance with local, state and federal environmental laws and regulations. Other work includes participation in the environmental justice task force; preparation of environmental justice white paper presented to Commissioners; research and preparation of discussion on discount rates and net present value for the SFEC siting project; preparation of socioeconomic section on 1996 Quincy Library Group Report; preparation of forestry section on 1997 CEC Global Climate Change Report; demographic research for environmental justice issues in siting cases.

1992  
to  
1993

**Project Manager/Environmental Analyst/Planner. Beak Consultants.**

Environmental Planner for EIR/EA for the Mammoth County Water District. Analyzed potential impacts resulting from lake water transfers and maintenance of in-stream flows in the Mammoth Lakes Basin; prepared land use, socioeconomics, recreation, and public services and utilities sections of EIR/EA; provided team project management.

Environmental Planner for an Effluent Treatment Plant EIR for Simpson Paper Company in Humboldt County. Authored land use, socioeconomics, recreation, public services and utilities, cumulative impacts sections, and mitigation monitoring; provided team project management.

Environmental Planner for Folsom/SAFCA Reoperation. Work involved determining parameters of project description with respect to water modeling, project geographic boundaries, and agency jurisdictional boundaries; ensured compliance with federal, state, and local plans and policies; provided team project management.

1990  
to  
1992

**Environmental Analyst/Project Manager. ECOS. Inc.**

Project Manager/Planner. EIR for a Planned Development, General Plan Amendment, and rezone request for a 504-acre Business and Industrial Park expansion for the Port of Sacramento. Prepared work scope and budget for Public Improvements Plan and Specific Plan for an 80-acre Mixed Use/Water Related development, including a Mitigation Monitoring Plan and Statement of Overriding Considerations for the City of West Sacramento. Specific tasks included coordination with subcontractors on technical sections of EIR, meetings with Assistant Port Director and City staff to present Public Improvements Plan, Specific Plan, tentative parcel map, and critical project phasing; and discussion with CDFG and Port staff on regional approach to mitigation for project-impacted endangered species.

Project Manager/ Planner. EIR for the Wildhorse Residential/Recreational Planned Development for the City of Davis. Specific tasks included CEQA compliance, writing technical sections on land use, project alternatives, and cumulative impacts, and determining appropriate project alternatives based on traffic models and allowable housing densities.

Project Manager. Yolo County Powerline Ordinance. Project tasks included developing siting policies and mitigation measures for placement of powerlines and substations in Yolo County.

- 1989 to 1990 **Assistant Planner.** Sacramento County Planning Department.  
Principal Author. Energy Component of the Public Services and Facilities Element of the Sacramento County General Plan. Coordinated work efforts with the CEC, SMUD, and PG&E to develop environmental and siting policies for energy facilities and transmission lines; identified environmental impacts and appropriate mitigation measures.
- 1987 to 1989 **Planner/Assistant Planner.** Yolo County Community Development  
Planning liaison for Homestake Mining Company's McLaughlin Mine. Conducted meetings on the Technical Review Panel's environmental monitoring of HMC's McLaughlin Mine; prepared staff reports on the implementation of use permit phasing on water quality and impacts of the tailings pond on biologic resources; organized site visits to monitor the revegetation plan and other mitigation measures as specified in the use permit; presented oral and written staff reports to the Planning Commission.
- 1988 **Consultant.** Pan Pacific Energy Development Corporation.  
Consulting job to develop a regional energy plan for rural areas of developing countries including decentralized non-fossil fuel power plants in agricultural regions. Attended IREC and AWEA International Conference in Honolulu.

#### **PROFESSIONAL AND CONTINUING EDUCATION**

- 1988 California Environmental Quality Act (UC Davis)  
1989 Subdivision Map Act (UC Davis)  
1991 Fiscal Impact Analysis (UC Davis)  
1994 APA Conference (San Francisco)  
1994 Environmental Justice Conference (UC Berkeley)  
1998 California Environmental Quality Act (California Energy Commission)  
1999 Roundtable on Environmental Justice US/Mexico Border  
2000 Local Agency Formation Commission - LAFCO (UC Davis)  
2005 Geographic Information System - GIS (UC Davis)  
2006 Mapping Your Community GIS and Community Analysis (Sacramento, CA)

#### **PROFESSIONAL AFFILIATIONS**

- Association of Environmental Professionals  
American Planning Association

## DECLARATION OF Cheryl Closson

I, Cheryl Closson, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Protection Office of the Siting, Transmission and Environmental Protection Division as an Engineering Geologist.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Soil and Water Resources** for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 4, 2008

Signed: Cheryl Closson

At: Sacramento, California

## **Cheryl Closson, P.G.**

### **Education:**

B.A., Earth Science, 1982  
University of California, Berkeley

### **Professional Licensure:**

California Professional Geologist #6651

### **Professional Experience:**

Ms. Closson has over 20 years of experience in energy/mineral resource assessment and environmental regulation, including experience in performance of technical evaluations, project management, policy and standards development, and regulatory compliance. Ms. Closson's breadth of experience provides her with a comprehensive, multi-media perspective and understanding of waste and water technical issues and regulatory concerns.

#### **2007 to Present – Engineering Geologist (Range D), California Energy Commission**

Perform technical evaluations of the waste management, soil and water elements of power plant applications for certification. These evaluations include technical assessments of the potential environmental impacts associated with construction and operation of proposed facilities, as well as evaluation of the proposed project's compliance with applicable federal, state, and local laws, ordinances, regulations, and standards (LORS), and Energy Commission policies.

#### **2006 to 2007 – Hazardous Substances Scientist, Department of Toxic Substances Control**

Provided technical reviews and regulatory guidance to industrial waste generators and the general public on hazardous waste source reduction and pollution prevention; developed guidance and outreach documents to facilitate and promote pollution prevention.

#### **2005 to 2006 – Engineering Geologist (Range D), Office of Mine Reclamation, Department of Conservation**

Conducted technical reviews of plans and cost estimates for reclamation of surface mines in accordance with the Surface Mining and Reclamation Act (SMARA); performed mine site inspections and responded to complaints about mining activities; and developed training workshops for lead agencies, miners, and the public on SMARA-related laws and requirements.

#### **1997 to 2005 – Hazardous Substances Scientist, Department of Toxic Substances Control**

Provided regulatory assessments and guidance to waste generators on a variety of hazardous waste management issues. Developed regulations for the management of hazardous waste and provided analyses of waste-related legislative proposals; developed and delivered training classes and wrote factsheets/guidance documents on management of hazardous wastes; and participated in hazardous waste-related investigations and enforcement efforts.

#### **1991 to 1996 – Associate Engineering Geologist, State Water Resources Control Board**

Conducted technical reviews of water quality planning projects, draft Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) permits, and

petitions to the State Board for review of Regional Board decisions. Staff lead and coordinator for both the Cal/EPA oil and gas exploration and production (E & P) regulatory review and the State Board's participation in the Interstate Oil and Gas Compact Commission review of California oil and gas E & P waste management regulatory programs. Prepared analyses of water-related legislative actions and provided regulatory compliance information to dischargers and the general public.

**1990 to 1991 – Associate Waste Management Specialist,  
California Integrated Waste Management Board**

Performed detailed reviews of closure and postclosure maintenance plans for solid waste disposal facilities. Reviews included technical evaluation of the placement of the facility and the appropriateness of mitigation/control features with respect to geologic and hydrologic conditions at the site. Reviewed local agency solid waste disposal plans; prepared Board agenda items, including staff analyses and recommendations; and made presentations to the Board at public hearings and meetings.

**1987 to 1990 – Energy Specialist I,  
California Energy Commission**

Managed geothermal resource assessment and exploratory drilling projects funded by the Energy Commission. Worked with applicants, consultants and resource agencies to design/develop project parameters and conducted technical reviews of products developed. Work included critically evaluating the project geologic environment and technology requirements, and developing a project budget consistent with the available funding, technical requirements, and successful completion of project goals.

**1986 to 1987 – Geologist,  
I-Chem Research**

Performed surface and ground water sampling and monitoring of selenium contamination at Kesterson Reservoir for the U.S. Bureau of Reclamation. Work included implementing quality assurance/quality control measures for all sampling efforts, performing chemical analyses in the field, and conducting chemical analyses in the laboratory of samples collected in the field.

**1985 to 1986 – Geologist,  
United States Bureau of Reclamation**

Conducted field sampling and laboratory studies of soil and water to identify conditions and potential sources of pollution impacting federal reservoirs and canals.

**1982 to 1984 – Physical Science Technician/Geological Field Assistant,  
United States Geological Survey**

Performed geologic field mapping and sampling at various locations in California and Washington states; conducted laboratory tests on rock samples collected in the field; and compiled, constructed, and drafted geologic maps, charts, and diagrams.



## DECLARATION OF

James Adams

I, James Adams declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Facilities, Transmission, and Environmental Protection Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on Traffic and Transportation for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 28, 2008

Signed: \_\_\_\_\_



At: Sacramento, California

**James S. Adams  
Environmental Protection Office  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5504  
PH (916) 653-0702, FAX (916) 654-3882  
Jadams@energy.state.ca.us**

5/1999

**Present Environmental Planner**

Review applications for certification to acquire permits from the California Energy Commission to build electric generating power plants. Specific technical fields include socioeconomics and traffic and transportation.

11/1997

**Present Energy and Resource Consultant**

Provide clients with technical expertise on various issues related to natural resource use and development. Current activities include managing an Intervention by the Redwood Alliance before the California Public Utilities Commission regarding the decommissioning of the Humboldt Bay Power Plant's nuclear reactor.

9/1994--

**10/1997 Senior Analyst - Safe Energy Communication Council (SECC)**

Responsible for developing and/or implementing campaigns on various energy issues involving the promotion of energy efficiency and renewable energy and advocating less reliance on nuclear power. Managed educational outreach efforts to newspaper editorial writers throughout the U.S. to encourage coverage of energy issues. Participated in meetings and negotiations with key Clinton administration officials, members of Congress and staff, national coalitions, and grassroots organizations on important energy issues (e.g. U.S. Department of Energy Budget for Fiscal Years 1996-1998). Successfully raised \$140,000 from private foundations to support SECC activities.

6/1978--

**12/1992 Principal Consultant - Redwood Alliance**

Provided consulting services to the Alliance; a renewable energy/political advocacy organization. Major responsibilities included managing and/or participating in several interventions/appearances before the California Public Utilities Commission, California Energy Commission, California Legislature, U.S. Congress and the U.S. Nuclear Regulatory Commission. Issues included electric utility planning options, greater reliance on energy efficiency and renewable energy, nuclear power economic analyses, decommissioning cost estimates, and nuclear waste management and disposal.

2/1983--

8/1986 **Natural Resource Specialist**

Assisted private consulting, firms, non-profit corporations and government agencies in various projects related to the enhancement and protection of national forests in Northern California and Southern Oregon. This included contracts with the U.S. Forest Service, Fish and Wildlife Service, National Park Service, the California Coastal Conservancy, and private landowners.

6/1978--

present Consultant/Journalist/Paralegal/Lobbyist

Throughout the period of work outlined above, I have written a considerable amount of news articles and reports connected to ongoing-projects and issues of personal interest. The legal/administrative interventions have required extensive paralegal work to support attorneys, and technical expertise to identify and assist consultants. In addition, many of the projects required consulting services and lobbying, at the local, state and federal level whenever necessary, as well as working with the print and television media as appropriate.

From 1978 through 1984 I served on the Board of Directors for two local non-profit agencies devoted to sustainable community development, Redwood Community Development Council and Redwood Community Action Agency (RCAA). I also was hired on staff at RCAA as a natural resource specialist which is explained more fully above. I am proficient with computers, printers, fax machines and related equipment.

## **EDUCATION**

M.A. Social Science. Political science and natural resources emphasis.  
California State University at Humboldt. Graduated December 1988.

B.A. Political Science. Political and economic aspects of natural resource development, with a particular emphasis in forest ecology and appropriate technology. California State University at Humboldt. Graduated June

1978.

Academic

Honors. Member of Phi Gamma Mu Honor Society since 1986.

## **MILITARY SERVICE**

7/1969--

9/1975 U.S. Navy. Air Traffic Controller.  
Honorable Discharge.

**DECLARATION OF**  
**Dr. Obed Odoemelam**

I, **Obed Odoemelam** declare as follows:

1. I am presently employed by the California Energy Commission in the **Environmental Protection Office** of the Systems Assessments and Facilities Siting as a **Staff Toxicologist**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Transmission Line Safety & Nuisance**, for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 11/4/08 Signed: Odoemelam

At: Sacramento, California

## RESUME

DR. OBED ODOEMELAM

### EDUCATION:

- 1979-1981     University of California, Davis, California. Ph.D., Ecotoxicology
- 1976-1978     University of Wisconsin, Eau Claire, Wisconsin.     M.S., Biology.
- 1972-1976     University of Wisconsin, Eau Claire, Wisconsin.     B.S., Biology

### EXPERIENCE:

1989

The Present:   California Energy Commission. Staff Toxicologist.

Responsible for the technical oversight of staffs from all Divisions in the Commission as well as outside consultants or University researchers who manage or conduct multi-disciplinary research in support of Commission programs. Research is in the following program areas: Energy conservation-related indoor pollution, power plant-related outdoor pollution, power plant-related waste management, alternative fuels-related health effects, waste water treatment, and the health effects of electromagnetic fields. Serve as scientific adviser to Commissioners and Commission staff on issues related to energy conservation. Serve on statewide advisory panels on issues related to multiple chemical sensitivity, ventilation standards, electromagnetic field regulation, health risk assessment, and outdoor pollution control technology. Testify as an expert witness at Commission hearings and before the California legislature on health issues related to energy development and conservation. Review research proposals and findings for policy implications, interact with federal and state agencies and industry on the establishment of exposure limits for environmental pollutants, and prepare reports for publication.

1985-1989     California Energy Commission.

Responsible for assessing the potential impacts of criteria and noncriteria pollutants and hazardous wastes associated with the construction, operation and decommissioning of specific power plant projects. Testified before the Commission in the power plant certification process, and interacted with federal and state agencies on the establishment of environmental limits for air and water pollutants.

1983-1985     California Department of Food and Agriculture.

Environmental Health Specialist.


Evaluated pesticide registration data regarding the health and environmental effects of agricultural chemicals. Prepared reports for public information in connection with the eradication of specific agricultural pests in California.

## DECLARATION OF DAVID FLORES

I, **David Flores** declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division as a **Planner 2**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Visual Resources** for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 28, 2008 Signed: 

At: Sacramento, California



## DAVID FLORES

### WORK EXPERIENCE

Sept. 1998  
to Present

**Planner 2.** California Energy Commission, Energy Facilities Siting and Protection Division.

- Provide technical analysis of proposed energy planning, conservation, and development programs on land use, visual and traffic and transportation resources. Specific tasks include: the analysis of potential impacts; identification of suitable mitigation measures; preparation of testimony; participate in public workshops; present sworn testimony during evidentiary hearings, and project monitoring to ensure compliance with local, state and federal environmental laws and regulations.

March 29, 1988  
to September 12, 1998

**Senior Planner.** County of Yolo Planning and Public Works Department

Senior Planner - Current and Advanced Planning (Resources Management and Planning)

Responsibilities included the following:

- Administered the establishment of Planning schedules and timeframe completion schedules; Administration and staff support to Planning Commission and Board of Supervisors; Staff support and liaison to citizen's committees. Preparation of Environmental documents (Negative Declarations, preparation of Environmental Impact Reports and Categorical Exemptions) in accordance with State and Federal Regulations.

June 1, 1976  
to March 25, 1988

**Manager of Resources** Citizens Utilities Company of California

Responsibilities included the following:

- Coordinated, planned and developed semi-annual and annual construction and operating and maintenance budgets for all Northern California operations.
- Assisted in the development of rate and fee schedules before the California Public Utilities Commission for all Northern California Operations.
- Direct five employees and twenty-five employees in the outlying operations.
- Extensive experience in specification writing, project planning and scheduling, construction management, and site supervision

### EDUCATION

California State University @ Sacramento  
University of California @ Davis  
Major: Environmental Studies  
Minor: Business Administration

## DECLARATION OF Ellen Townsend-Hough

I, **Ellen Townsend-Hough** declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Siting Office of the Energy Facilities Siting Division as an Associate Mechanical Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on Waste Management for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 29, 2008

Signed: Ellen Townsend-Hough

At: Sacramento, California

# Ellen Townsend-Hough

## SUMMARY

I am a chemical engineer with over 20 years of experience. My professional career has afforded me many unique growth and development opportunities. Working knowledge of the California Environmental Quality Act. Strength in analyzing and performing complex engineering analyses. Also worked as a policy advisor to a decision-maker for three years.

## PROFESSIONAL EXPERIENCE

### Writing

- Write letters, memos, negative declarations, environmental impact reports that require technical evaluation of mechanical engineering and environmental aspects of pollution control systems, environmental impacts, public health issues and worker safety.

### Technical Analysis and Presentation

- Performs mechanical engineering analysis of designs for complex mechanical engineering analysis of designs for systems such as combustion chambers and steam boilers, turbine generators, heat transfer systems, air quality abatement systems, cooling water tower systems, pumps and control systems
- Review and process compliance submittals in accordance with the California Environmental Quality Act, the Warren Alquist Act, the Federal Clean Air Act and the California and Federal Occupational Health and Safety Acts to assure compliance of projects
- Provides licensing recommendations and function as an expert witness in regulatory hearings.
- Provide public health impact analysis to assess the potential for impacts associated with project related air toxic/non-criteria pollutant emissions.
- Evaluate the potential of public exposure to pollutant emissions during routine operation and during incidents due to accidents or control equipment failure
- Provide an engineering analysis examining the likelihood of compliance with the design criteria for power plants and also examine site specific potential significant adverse environmental impacts

### Technical Skills

- Establish mitigation that reduces the potential for human exposure to levels which would not result in significant health impact or health risk in any segment of the exposed population.
- Assist with on-site audits and inspection to assure compliance with Commission decisions.
- Review and evaluate the pollution control technology applied to thermal power plants and other industrial energy conversion technologies.
- Work with the following software applications: WORD, Excel, and PowerPoint.

### Policy Advisor

- Provided policy, administrative and technical advice to the Commissioner Robert Pernell. My work with the Commissioner focused on the policy and environmental issues related to the Commission's power plant licensing, research and development and export programs.
- Track and provide research on varied California Energy Commission (CEC) programs. Prepare analysis of economic, environmental and public health impacts of programs, proposals and other Commission business items.
- Represent Commissioner's position in policy arenas and power plant siting discussions.
- Write and review comments articulating commission positions before other regulatory bodies including Air Resources Board, California Public Utilities Commission, and the Coastal Commission.
- Wrote speeches for the Commissioner's presentations.

## **EMPLOYMENT HISTORY**

2002-Present	Associate Mechanical Engineer	CEC Sacramento CA
1999-2002	Advisor to Commissioner	CEC Sacramento CA
1989-1999	Associate Mechanical Engineer	CEC Sacramento CA
1992-1993	Managing Partner	EnvironNet Sacramento CA
1988-1989	Sales Engineering Representative	Honeywell Inc Commerce CA
1987-1988	Chemical Engineer	Groundwater Technology Torrance CA
1985-1986	Technical Marketing Engineer	Personal Computer Engineers Los Angeles CA
1985-1985	Energy Systems Engineer	Southern California Gas Company Anaheim CA
1980-1985	Design and Cogeneration Engineer	Southern California Edison Rosemead CA
1975-1980	Student Chemical Engineer	Gulf Oil Company Pittsburgh PA

## **EDUCATION**

Bachelor of Science, Chemical Engineering  
Drexel University, Philadelphia Pennsylvania

### Continuing Education

*Hazardous Material Management Certificate, University California Davis*  
*Urban Redevelopment and Environmental Law, University of California Berkley*  
*Analytical Skills, California Department of Personnel Administration (DPA) Training Center*  
*Legislative Process/Bill Analysis, DPA Training Center*  
*Federally Certified Environmental Justice Trainer*


***References furnished upon request.***

## DECLARATION OF Steve Baker

I, Steve Baker, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Senior Mechanical Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Facility Design**, and supervised preparation of the staff testimony on **Power Plant Efficiency, Power Plant Reliability, Noise and Vibration** and **Geology and Paleontology**, for the Orange Grove Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 11/3/2008 Signed: 

At: Sacramento, California

**STEVE BAKER, P.E.**  
Senior Mechanical Engineer

**Experience Summary**

Thirty-four years experience in the electric power generation field, including mechanical design, QA/QC, construction/startup and business development/licensing of nuclear, coal-fired, hydroelectric, geothermal and windpower plants; and engineering and policy analysis of thermal power plant regulatory issues.

**Education**

- California State University, Long Beach--Master of Business Administration
- California State Polytechnic University, Pomona--Bachelor of Science, Mechanical Engineering
- Registered Professional Engineer (Mechanical), California —  
No. M27737 expires 6/30/2010

**Professional Experience**

**1990 to Present**--Senior Mechanical Engineer, Facilities Siting Division - California Energy Commission

Technical lead person for the analysis of generating capacity, reliability, efficiency, noise, geology, paleontology and the mechanical, civil/structural and geotechnical engineering aspects of power plant siting cases. Key contributor to Commission's investigation into market impediments to the deployment of advanced high-efficiency generating technologies.

**1987 to 1990**--Generation Systems/Facility Design Unit Supervisor, Siting & Environmental Division - California Energy Commission

Responsible for supervising the analysis of generating capacity, reliability, efficiency, safety, and mechanical, civil/structural, and geotechnical engineering aspects of power plant siting cases.

**1981-1986**--Operations Manager, Alternate Energy - Santa Fe Pacific Realty Corporation

Participated in and supervised identification, evaluation and feasibility analysis, licensing and permitting of hydroelectric, geothermal, windpower and biomass power projects.

**1974-1981**--Mechanical Engineer, Quality Engineer - Bechtel Power Corporation and Bechtel National, Inc.

Wrote equipment specifications, drew flow diagrams and P&ID's, performed system design and safety analysis for nuclear power plants and nuclear fuel processing plant. Wrote and implemented QA/QC procedures for nuclear power plant. Participated in construction/startup of large coal-fired power plant.



**DECLARATION OF**  
Testimony of Dal Hunter, Ph.D., C.E.G.

I, **Dal Hunter, Ph.D., C.E.G.**, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Systems Assessment and Facilities Siting Division, as an engineering geologist.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **GEOLOGY AND PALEONTOLOGY** for the **Orange Grove Power Plant Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 28, 2008

Signed: \_\_\_\_\_



At: Black Eagle Consulting, Inc.  
Reno, Nevada



exp 3.31.09

# **Robert D. Hunter, Ph.D., C.E.G.**

## **Engineering Geologist**

### **Vice President**

#### **Education**

- Ph.D. – Geology – 1989 – University of Nevada, Reno
- M.S. – Geology – 1976 – University of California - Riverside
- B.S. – Geology – 1972 – California State University, Fullerton

#### **Registrations**

- Professional Geological Engineer – Nevada
- Registered Geologist – California
- Certified Engineering Geologist – California

#### **Experience**

1997 to Present: Black Eagle Consulting, Inc.; Vice President. Dr. Hunter is in charge of all phases of geochemical, geological, and geotechnical projects and is responsible for conducting, coordinating, and supervising geotechnical investigations for public and private sector clients. He is very familiar with design specifications and state and federal requirements.

Dr. Hunter has also provided geological, geotechnical, and paleontological review and written and oral testimony for California Energy Commission (CEC) power plant projects including:

- El Segundo Power Redevelopment Project (Coastal)
- Magnolia Power Project (including compliance monitoring)
- Ocotillo Energy Project (Wind Turbines)
- Vernon-Malburg Generating Station
- Inland Empire Energy Center (including testimony and compliance monitoring)
- Palomar Energy Project
- Henrietta Peaker Project
- East Altamont Energy Center
- Avenal Energy Center
- Teayawa Energy Center monitoring
- Walnut Energy Center (including compliance monitoring)
- Riverside Energy Resource Center
- Salton Sea Unit 6 (Geothermal Turbines)
- National Modoc Power Plant
- Pastoria Energy Center
- Otay Mesa Generating Project (compliance monitoring)
- Mountainview Power Plant Project (compliance )
- Consumes Power plant (compliance monitoring)
- Sunrise Power Project (compliance monitoring )

Attended Expert Witness Training Sponsored by CEC.

1978 to 1997: SEA, Incorporated; Geotechnical Manager, Engineering Geologist. Dr. Hunter was in charge of all phases of geotechnical projects for SEA, including project coordination and supervision, field exploration, geotechnical analysis, slope stability analysis, soil mechanics, engineering geochemistry, mineral and aggregate evaluations, and report preparation. Numerous investigations were undertaken on military, commercial, industrial, airport, residential, and roadway projects. He worked on many geothermal power plants, providing expertise in foundations design, slope stability, seismic assessment, geothermal hazard evaluation, expansive clay, and settlement problems. Project types included high-rise structures, airports, warehouses, shopping centers, apartments, subdivisions, storage tanks, roadways, mineral and aggregate evaluations, slope stability analyses, and fault studies.

1977 to 1978: Fugro (Ertec) Incorporated Consulting Engineers and Geologists; Staff Engineering Geologist; Long Beach, California.

### **Affiliations**

- Association of Engineering Geologists

### **Publications**

- Hunter, 1988, *Lime Induced Heave in Sulfate Bearing Clay Soils*, Journal of Geotechnical Engineering, ASCE, Vol. 14, No. 2, pp. 150-167.
- Hunter, 1989, *Applications of Stable Isotope Geochemistry in Engineering Geology*: Proceedings of the 25<sup>th</sup> Annual Symposium on Engineering Geology and Geotechnical Engineering.
- Hunter, 1993, *Evaluation of Potential Settlement Problems Related to Salt Dissolution in Foundation Soils*: Proceedings of the 29<sup>th</sup> Annual Symposium on Engineering Geology and Geotechnical Engineering.

**DECLARATION OF**  
**Erin Bright**

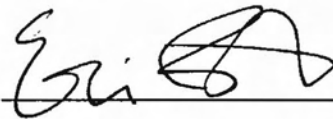
I, **Erin Bright**, declare as follows:

1. I am presently employed by the California Energy Commission in the **Engineering Office** of the Siting, Transmission and Environmental Protection Division as a **Mechanical Engineer**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Power Plant Efficiency** and **Power Plant Reliability** for the **Orange Grove Project** based on my independent analysis of the Application, supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 3, 2008

Signed: \_\_\_\_\_



At: Sacramento, California

**Erin Bright**  
Mechanical Engineer

**Experience Summary**

One year of experience in the electric power generation field, including analysis of noise pollution, construction/licensing of electric generating power plants, and engineering and policy analysis of thermal power plant regulatory issues. One year of experience in the alternative energy field, including analysis of alternative fuel production and use.

**Education**

- University of California, Davis--Bachelor of Science, Mechanical Engineering and Materials Science
- University of California, Davis Extension Program--Renewable Energy Systems

**Professional Experience**

**2007 to Present--** Mechanical Engineer, Energy Facilities Siting Division - California Energy Commission

Performed analysis of generating capacity, reliability, efficiency, noise, and the mechanical, civil/structural and geotechnical engineering aspects of power plant siting cases.

**2006 to 2007--**Energy Analyst, Fuels & Transportation Division - California Energy Commission

Performed analysis of use potential and environmental effects of emerging non-petroleum fuels, including compressed natural gas, biomass, hydrogen and electricity, in heavy and light duty transportation vehicles. Contributor to Energy Commission's alternative fuels plan.


## DECLARATION OF AJOY GUHA

I, **Ajoy Guha**, declare as follows:

1. I am presently employed by the California Energy Commission in the **Transmission System Engineering unit** of the Siting, Transmission and Environmental Protection Division as an Associate Electrical Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Transmission System Engineering**, for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10-29-08

Signed: 

At: Sacramento, California



## **RESUME**

**AJOY GUHA**  
*Associate Electrical Engineer*  
*California Energy Commission*  
*1516 Ninth Street, MS 46*  
*Sacramento, CA 95814*

### **EDUCATION:**

MSEE, POWER SYSTEMS ENGINEERING, PURDUE UNIVERSITY, INDIANA  
BSEE, ELECTRICAL ENGINEERING, CALCUTTA UNIVERSITY, INDIA

### **CERTIFICATIONS:**

REGISTERED PROFESSIONAL ENGINEER, CALIFORNIA, INDIANA & ILLINOIS  
MEMBER OF IEEE; MEMBER OF THE INSTITUTION OF ENGINEERS OF INDIA

### **SUMMARY OF PROFESSIONAL BACKGROUND:**

Ajoy Guha, P. E. has 34 years of electric utility experience with an extensive background in evaluating and determining current and potential transmission system reliability problems and their cost effective solutions. He has a good understanding of the transmission issues and concerns. He is proficient in utilizing computer models of electrical systems in performing power flow, dynamic stability and short circuit studies, and provide system evaluations and solutions, and had performed generator interconnection studies, area transfer and interconnected transmission studies, and prepared five year transmission alternate plans and annual operating plans. He is also experienced in utilizing Integrated Resource Planning computer models for generation production costing and long term resource plans, and had worked as an Executive in electric utilities and experienced in construction, operation, maintenance and standardization of transmission and distribution lines.

### **WORK EXPERIENCE:**

#### **CALIFORNIA ENERGY COMMISSION, ENERGY FACILITIES SITING AND ENVIRONMENTAL DIVISION, SACRAMENTO, CA, 11/2000-Present.**

Working as Associate Electrical Engineer in the Transmission System Engineering unit on licensing generation projects. Work involves evaluating generation interconnection studies and their impacts on transmission system, and providing staff assessments and testimony to the commission, and coordination with utilities and other agencies.

#### **ALLIANT ENERGY, DELIVERY SYSTEM PLANNING, MADISON, WI, 4/2000-9/2000.**

Worked as Transmission Services Engineer, performed Generator Interconnection studies and system planning studies.

#### **IMPERIAL IRRIGATION DISTRICT, POWER DEPT., Imperial, California, 1985-1998.**

Worked as Senior Planning Engineer in a supervisory position and in Transmission, Distribution and Integrated Resource planning areas. Performed interconnection studies for 500 MW geothermal plants and developed plan for a collector system, developed methodologies for transmission service charges, scheduling fees and losses. Worked as the Project Leader in the 1992 Electricity Report (ER 92) process of the California Energy Commission. Worked as the Project Leader for installation of an engineering computer system and softwares. Assumed the Project Lead in the standardization of construction and materials, and published construction standards.

#### **CITY LIGHT & POWER, Frankfort, Indiana, 1980 – 1985.**

Worked as Assistant Superintendent and managed engineering, construction and operation depts.

#### **WESTERN ILLINOIS POWER CO-OP., Jacksonville, Illinois, 1978 – 1980.**

Worked as Planning Engineer and was involved in transmission system planning.

#### **THE CALCUTTA ELECTRIC SUPPLY CORPORATION LTD. (CESC), Calcutta, India, 1964 –1978.**

Worked as District Engineer and was responsible for managing customer relations, purchasing and stores, system planning, construction, operation and maintenance departments of the most industrialized Transmission and Distribution division of the Utility. Worked as PROJECT MANAGER for construction of a 30 mile Double Circuit 132 kV gas-filled Underground Cable urban project. During 1961-63, worked as Factory Engineer for design, manufacturing and testing of transformers, motor starters and worked in a coal-fired generating plant.

## DECLARATION OF Mark Hesters

I, **Mark Hesters** declare as follows:

1. I am presently employed by the California Energy Commission in the **Strategic Transmission Planning Office** of the Siting, Transmission and Environmental Protection Division as a **Senior Electrical Engineer**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Transmission System Engineering**, for the **Orange Grove Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: Nov 10, 2008

Signed: \_\_\_\_\_

At: Sacramento, California

Mark Hesters  
Associate Electrical Engineer

Mark Hesters has sixteen years of experience in electric power regulation. He worked in the Engineering Office of the California Energy Commission's Energy Facilities Siting & Environmental Protection Division since 1998 providing analysis of California transmission systems and testimony on transmission systems in several Commission power plant certification processes. Prior to that Mark worked in the CEC's Electricity Analysis Office providing lead analysis on Southern California Edison resource issues and modeling support for all areas of California. He holds a B.S. degree from the University of California at Davis in Environmental Policy Analysis and Planning.

**DECLARATION OF**  
**Suzanne L. Phinney, D.Env.**

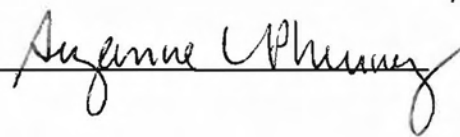
I, Suzanne L. Phinney, declare as follows:

1. I am presently employed by Aspen Environmental Group, consultant to the California Energy Commission's Facilities Siting Office of the Systems Assessments and Facilities Siting Division as a Senior Associate.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on Alternatives for the Orange Grove Plant Licensing Case Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 29, 2008

Signed: \_\_\_\_\_



At: Sacramento, California

**SUZANNE L. PHINNEY, D. ENV.**  
**Vice President, Sacramento Operations**

**ACADEMIC BACKGROUND**

Doctorate, Environmental Science & Engineering (D.Env.),  
University of California, Los Angeles, 1981  
M.S., Marine Biology, Dalhousie University, Halifax,  
Nova Scotia, Canada, 1975  
B. A. Biological Sciences  
University of California, Berkeley, 1973

**PROFESSIONAL EXPERIENCE**

Dr. Phinney has over 20 years of experience in the environmental field, supporting both the public and private sectors in environmental remediation, air and water quality assessments, risk assessment, regulatory compliance, permitting and project/program management.

**Aspen Environmental Group**

**2001 to present**

As Vice President, Sacramento Operations, Dr. Phinney is responsible for all aspects of work conducted from Aspen's Sacramento office. Her responsibilities include project management, client support and biological, air and water resource analyses. Dr. Phinney was project manager for Aspen's technical contributions, graphics and production efforts related to the California Energy Commission's Environmental Performance Report which details the current and historical air, water and biological impacts from in-state generation facilities. She is currently scoping a major effort for the Energy Commission to review and update information on alternative electric generation technologies. Dr. Phinney is also serving as author and Aspen Power Plant Coordinator for several power plant applications currently under review at the Energy Commission.

**GenCorp**

**1999 to 2000**

As Vice President, Environmental and Regulatory Affairs, Dr. Phinney held primary responsibility for coordinating the company's aerospace and automotive environmental activities with various federal, state, and local regulatory agencies. Her specific responsibilities included: working with external groups and entities to develop responsible environmental legislation, regulations, and standards and the implementation of sound public policy; developing stakeholder base and strategy to ensure that company objectives were achieved; facilitating company and regulatory agency discussions to achieve more comprehensive and quicker remediation of sites; and spearheading a stakeholder group to develop and fund scientific studies on selected chemicals of concern. Specific projects include:

- # **Perchlorate Standard Setting:** Developed strategy to convince state agency to refrain from a standard setting process that would have resulted in a premature, highly restrictive standard. Strategy involved the identification and completion of focused health studies in an unprecedented rapid timeframe, development of multi-stakeholder partnership group and open-ended frequent communication with all parties.
- # **NOx Reduction Stakeholder Group:** Coordinated business, health, environmental, regulatory agency and elected official representatives in an accelerated process to identify and implement actions that would reduce emissions of nitrogen oxides (NOx) in the Sacramento region. In the space of nine months, group has created legislation that will bring \$70,000,000 of incentive funds to the region, has significantly advanced introduction of new technologies, developed educational materials and secured regulatory agency commitments to streamline approval process and timelines.

**Aerojet General Corporation**

**1984 to 1999**

As Vice President, Environmental, Health and Safety, Dr. Phinney ensured that programs were in place to meet all regulatory requirements and company initiatives. Her responsibilities included: providing strategic direction

and management of all superfund-related investigation and remediation activities; communicating environmental requirements, concerns, and successes to both internal and external audiences, including the board of directors, investment banking, and the analyst community; and participating as a member of the leadership council in defining company-wide business objectives and targets.

Dr. Phinney created the first corporate ESH department, defining and staffing key functional areas. She managed a \$20,000,000 annual budget and oversaw a staff of up to 30 professionals. Select accomplishments include: the development of remediation technologies that resulted in the cleanup of over 50 billion gallons of contaminated groundwater; development of the world's first groundwater treatment facility for perchlorate; representation on numerous legislative and regulatory task forces and leadership positions on external business and community EHS committees and councils; and extensive public outreach efforts. Representative projects include:

- **Carveout of Noncontaminated Land:** Participated in negotiations and meetings with state agency to carve out 1,500 acres from "Superfund" designation. Oversaw the completion of investigation activities and the submission of a report which resulted in removal of the acreage from any future regulatory requirements.
- **Development of Cost-Efficient NDMA Treatment Technology:** Completed screen and bench testing of alternative NDMA treatment technologies which ultimately saved 95% of the electrical power consumed by other methods of NDMA removal previously used onsite.
- **Construction of Perchlorate Treatment Facility:** Designed and constructed the world's first perchlorate treatment plant, a 4,000 gpm capacity with expansion capabilities to 8000 gpm. Received the Aerojet Technology Development Award and GenCorp Technology Award for this project.
- **Reduction of Soil Remediation Costs:** Conducted statistical calculations and toxicology review of metal-impacted soils and presented findings to the California EPA to prove that the soils did not pose a health threat. As a result, received agency agreement not to require remediation of 2,000 cubic yards of beryllium impacted soils, saving over \$250,000 in planned soil remediation costs.
- **Recovery of Insurance Costs:** Provided extensive support to legal counsel in insurance recovery actions. Provided back-up documentation for all environmental invoices dating back to 1991 and documented all environmental operations activities since that date. Actions supported reimbursement of tens of millions of dollars by insurers in past costs.
- **Safety and Environmental Awards:** Under Dr. Phinney's management, Aerojet received the Sacramento Safety Center's highest safety award in 1998 for its outstanding safety record. The company was also a 1998 winner in the state of California's waste reduction awards program (WRAP).
- **Environmental Compliance:** Ensured that the company received no notices of major environmental violations and/or fines. Significantly reduced total environmental incidents and reportable incidents through the implementation of health and safety training programs throughout the plants.
- **Avoidance of Disposal Costs:** Received RCRA treatment/storage permits for seven RCRA units in Sacramento, which allowed the company to treat materials on site versus off site disposal, resulting in cost savings of approximately \$2,000,000 per year. Similarly surplus sales of waste material in Sacramento netted \$38,000 with disposal cost avoidance of \$1,130,000.
- **Closure of Facility/Regulatory Compliance:** Received timely approval of the closure of the Chino Hills facility, significantly reducing the explosive inventory and closing out the radioactive materials license. Also, completed asbestos and lead paint building survey with results indicating only a limited exposure from these issues.
- **Waste Reduction:** Managed highly effective waste reduction programs. Eliminated use of all CFC materials well in advance of regulatory requirements. Increased waste reduction and cost avoidance of hazardous waste disposal by negotiating sales of 75% of surplus chemicals
- **Community Relations/Partnerships:** Worked closely with community groups on issues of concern to the community and the company. As chair of the Cleaner Air Partnership, a joint project of the American Lung



Association and the Metropolitan Chamber of Commerce, developed strategies and defined educational efforts to help the Sacramento region achieve air quality standards.

Represented the business community on the Sacramento Water Forum, a five-year partnership effort which successfully defined water supply and environmental needs 30 years into the future. Also served on the City of Sacramento Toxics Commission and the joint Sacramento City/County Environmental Commission.

- **Banking/Financial Expert Witness/Congressional Testimony:** Provided briefings to financial and banking institutions regarding Aerojet's environmental programs and liabilities. Presented testimony before a joint congressional committee on defense reimbursement of environmental costs.
- **Government Negotiations:** Negotiated and subsequently implemented all requirements under a Partial Consent Decree with federal and state government agencies for the investigation of the 8,500 acre Sacramento site.

## PREVIOUS EXPERIENCE

1976 to 1984

As a Senior Environmental Scientist for **Jacobs Engineering Group**, conducted toxicological, ecological, and air and water quality assessments.

As Research Associate for the **Department of Environmental Science and Engineering at the University of California**, Los Angeles, analyzed legal, economic, public health, and administrative barriers to waste water reuse. Also conducted analysis of ecological and institutional factors in coastal siting of power plants.

As Instructor at **Southwest Los Angeles Junior College** taught lecture and laboratory course in general science.

## TRAINING

Certificate, Executive Program - University of California, Davis, 1989

## HONORS AND AWARDS

Who's Who of American Women, 18<sup>th</sup> Edition

YWCA Outstanding Woman of the Year (Sciences) Award - 1992

Woman of Achievement Award, Downtown Capitol Business and Professional Women - 1993

Individual Award for Outstanding Contribution in Air Quality - 1995

Sacramento Safety Center Incorporated, Eagle Award for Safety - 1998

## ACTIVITIES AND ASSOCIATIONS

Member, National Association of Environmental Professionals

Editorial Board, The Environmental Professional - 1987 to 1989

City of Sacramento Toxic Substances Commission - 1986 to 1988

Sacramento Environmental Commission - 1988 to 1991

Board of Directors, League of Women Voters of Sacramento - 1989 to 1999; President - 1996 to 1997;

Co-President - 1997 to 1998

Toxics Consultant, League of Women Voters of Sacramento - 1988 to 1989

Member, Advisory Committee on AB 3777 (Risk Management Prevention Programs)

Board of Directors, American Lung Association of Sacramento-Emigrant Trails - 1992 to 2000; President - 1998 to 1999

Board of Directors, Sacramento Metropolitan Chamber of Commerce - 1992 to 1997; Vice President, Public Policy - 1996 to 1997

Board of Directors, Air and Waste Management Association - 1991 to 1994

Steering Committee Chair, Cleaner Air Partnership - 1993 to 1996, 2000 to 2001; Executive Committee - 1993 to Present

Co-chair, TCE Issues Group - 1994 to 2000

Sacramento Water Forum - 1995 to 2000

Rate Advisory Committee, Sacramento Municipal Utility District - 1999 to 2001

#### SELECTED PUBLICATIONS/PRESENTATIONS

- Phinney, S.L., "Trends in Industrial Waste Generation and Management" Presented at National Ground Water Association Conference, Las Vegas, Nevada, 1996.
- Phinney, S.L., "Effective Management of an RI/FS to Reduce Financial Exposure," Manufacturers Alliance Environmental Management Council, Washington, D.C., 1995.
- Phinney, S.L., "Knowing Your Compliance Challenge," 7<sup>th</sup> Annual California Statewide Community Awareness and Emergency Response (CAER) Conference, Sacramento, California, 1995.
- Phinney, S.L., "Industry's Role in Broadening the Use of Alternative Fuels in America," Clean Cities Ceremony, Sacramento, California, 1994.
- Phinney, S.L., "Aerospace Industry Perspective on Defense Conversion," AAAS Annual Meeting, San Francisco, California, 1994.
- Phinney, S.L., "Aerojet's Waste Reduction Successes," Business for the Environment Conference, Sacramento, California, 1993.
- Phinney, S.L., "Company Worker Trip Reduction Programs Under the Clean Air Act Amendments," MAPI Hazardous Materials Management Council, Washington, D.C., 1993.
- Phinney, S.L., Testimony Before House Government Operations Subcommittee, 1993.
- Phinney, S.L., Moderator - The Clean Air Act, A Public Forum, Sacramento, California, 1993.
- Phinney, S.L., Plenary Session Chairperson and Speaker, "Business and the Environment: Must You Sacrifice One for the Other?" National Association of Environmental Professionals Conference, Seattle, Washington, 1992.
- Phinney, S.L., "Facing the Challenge: The New California EPA." HazMat Northern California Conference, San Jose, California, 1992.
- Phinney, S.L., "Understanding the Client Perspective." Environmental Business Conference, Pasadena, California, 1991.
- Phinney, S.L., Panelist - Women of Science: Secrets of Success. Workshop, AAAS Annual Meeting, Washington, D.C., 1991.
- Phinney, S.L., Keynote Address, ADPA International Symposium on Compatibility and Processing, San Diego, California, 1991.
- Phinney, S.L., Keynote Address, Women in Science and Technology Conference, Jackson, Mississippi, 1991.
- Phinney, S.L., Guest Speaker, Sacramento County Bar Association, Environmental Law Section, Sacramento, California 1991.
- Phinney, S.L., "PRP Response to RI/FS Activities." Lecture Presented to U.C. Davis Extension Course, January, 1991.
- Phinney, S.L., "Managing CERCLA Compliance from the Corporate Perspective." Hazardous Materials Management Conference/West, Long Beach, California, 1988.
- Phinney, S.L. and C.A. Fegan, "Identifying a Feasible, Effective Treatment Method for an Unusual Chemical of Concern." Proceedings, American Defense Preparedness Association 16th Environmental Symposium, New Orleans, Louisiana, 1988.
- Phinney, S.L., "A Proactive Superfund Cleanup by Industry." Proceedings of the 4th Annual Hazardous Materials Management Conference/West, Long Beach, California, 1988.
- Thompson, C.H., S.L. Phinney and F.R. McLaren., "Aerojet: A Regional Site Program - Problem Definition." Proceedings of the Hazardous Waste and Environmental Emergencies Conference, Cincinnati, Ohio, 1985.
- Kahane S.W., S.L. Phinney and A. Wright, "The Tightening Environmental Regulatory Climate for Hazardous Waste Management - Current Mandates and Future Directions for Industrial Compliance." Proceedings of the 1984 AIChE Summer National Meeting, Philadelphia, Pennsylvania, 1984.
- Bachrach, A., D.M. Morycz, S.L. Phinney and S.W. Kahane, "Regulation and Offshore Oil and Gas Facilities." In: Emerging Energy/Environmental Trends and the Engineer. Eds. R.D. Nuefeld and R.W. Goodwins, 1983.
- Lindberg, R.G., S.L. Phinney, J. Daniels and J. Hastings (eds.), "Environmental Assessment of the U.S. Department of Energy's Solar Thermal Technology Program." Prepared for the U.S. Department of Energy, June, 1982.

Kahane, S.W., S.L. Phinney, J.A. Hill and R.C. Sklarew, "Key Considerations in Assessing the Air Impacts of Projected Outer Continental Shelf Oil and Gas Development," presented at the 74th Annual Air Pollution Control Association Meeting, Philadelphia, Pennsylvania, 1981

Phinney, S.L., "The U.S. Environmental Protection Agency's Pesticide Registration Program: A Case Study - Chloramben." Doctoral Dissertation, Environmental Science and Engineering Program, University of California, Los Angeles, California, 1981.

Phinney, S.L., (contributing author) et al. "Institutional Barriers to Wastewater Reuse in Southern California." Environmental Science and Engineering Report Prepared for the Office of Water Research and Technology, U.S. Department of the Interior, 1979.

Phinney S.L., "Area-Restricted Feeding in American Plaice." Masters Thesis. Dalhousie University, Halifax, Nova Scotia, Canada, 1975.

**DECLARATION OF  
CHRIS DAVIS**

I, Chris Davis, declare as follows:

1. I am presently employed by the California Energy Commission in the Siting Office of the Systems Assessment & Facilities Siting Division as a Compliance Project Manager (Classification: Planner II).
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the Compliance General Conditions and Closure Plan section for the Orange Grove Project Staff Assessment based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue(s) addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 30, 2008

Signed: 

At: Sacramento, California

# Chris Davis

California Energy Commission  
1516 Ninth St., MS-2000  
Sacramento, California 95814  
(916) 654-4842

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## **Professional Experience**

**January 2008  
to present**

### **California Energy Commission**

**Planner II Compliance Project Manager** – Direct technical staff in tasks related to power plant project design, construction, operation, and associated environmental issues. Negotiate agreements between power plant operators, public agencies, and community groups. Consult with engineering, legal and technical staff to identify and resolve technical issues.

**2007-2008**

### **California Energy Commission**

**Energy Specialist I** – Education and outreach for the New Solar Homes Partnership (NSHP) and the Building Standards Office. Developed fact sheets on proposed changes to the 2008 building standards and a tutorial on how to use the PV Calculator to figure photovoltaic system power production and expected incentives. Wrote a case study, articles and Web pages explaining various aspects of the NSHP program. Certified by CalCERTS (California Energy Rating and Testing Services) as a Home Energy Rating System (HERS) rater for photovoltaic systems. Organized, developed materials for, and staffed Energy Commission booth/tables for conferences put on by California Building Energy Consultants (CABEC), California Building Officials (CALBO) and International Air Conditioning Institute (IHACI).

**2005-2007**

### **State Water Resources Control Board**

**Information Officer I** – Liaison between State Water Board, Central Valley Regional Water Board and media, as well as and media. Issues included waste (NPDES) permits, groundwater contamination and treatment, once-through cooling, emerging contaminants, contaminated beaches, stormwater, and areas of special biological significance off the California coast. Worked with reporters from the LA Times and other major California news organizations.

**2001-2005**

***California Energy Commission***

***Information Officer I*** – Joined the Energy Commission media office during California's power crisis. Liaison between CEC and media on the subject of power plant licensing. Wrote news releases about projects as they reached each milestone in the siting process, including a number of releases for Governor's office about new facilities going on-line. Initiated and developed Power Plant Fact Sheet, in cooperation with Siting Office manager. Served as 2004 president of the State Information Officers Council.

**2000-2001**

***Department of Consumer Affairs, Bureau of Automotive Repair***

***Information Officer I*** – Bureau of Automotive Repair (BAR) Communications Team Leader. Worked with media throughout California for extremely successful launch of the Smog Check Consumer Assistance Program to aid residents whose cars failed the smog test. Updated and wrote Smog Check fact sheets. Worked with DMV to include Smog Check information with car registration renewal notices.

**1994-2000**

***Metro Networks, Sacramento***

***News Bureau Chief*** – My staff of 17 provided anchored newscasts and network wire stories for 19 Sacramento, Stockton and Modesto radio stations. Liaison with local television stations and phone company for broadcast circuits. Kept all electronic equipment operating. Developed proposals and signed radio state affiliates.

**1983-1994**

***KZAP, Sacramento***

***News & Public Affairs Director*** – Won 12 broadcast news awards, ran internship program, wrote and edited annual FCC-required Issues/Programs report. Served as president of the Sacramento Valley Broadcasters Association (1993-1994) and Capital Radio-Television News Directors Association (1988-1994).